

but no motion of the camera seems likely to explain the many details in these ribbon photographs of natural lightning. On the contrary, there is one flash on Mr. Stewart-Smith's plate that has every indication of being certainly an oscillatory discharge, showing lines of flow identical with those photographed by Professor Trowbridge at Cambridge, and fully maintaining his conclusion, which was also that of Prof. Joseph Henry and J. Ogden Rood, that the lightning flash is an oscillatory discharge, repeated frequently to and fro within the crack in the air that is opened up by the first discharge. The whole process requires but a few millionths of a second, and the motion of the camera within that short time is insignificant.

#### THE KITE AND TELEPHONE.

On page 257 of the MONTHLY WEATHER REVIEW for June, 1898, we have referred to some interesting experiments on H. M. S. *Dauntless*, concerning which the Aeronautical Journal states that there is no such ship, that no such experiments were made in the navy, and that in recent kite experiments made on the torpedo boat destroyer *Daring* the kites were of the Baden-Powell pattern.

In a letter on this subject from Mr. S. P. Fergusson, of Blue Hill, he says:

The only experiments with kite telephones or telephone kites that I know of have been made in this country by Mr. William A. Eddy, of New York, who nearly two years ago succeeded in telephoning and telegraphing over a line held by kites. See Boston Herald, December 7, 1896 (or perhaps New York Herald of same date). It seems that the wire was carried over trees, several roadways or streets, etc., and lowered so that connections were readily made and messages sent. After all, the Americans are still ahead in the matter of kites for scientific purposes.

#### A MEMORIAL TO VOLTA.

The study of electricity begins with the discoveries of Galvani and Volta, especially the invention of the dry pile by the latter. The electricians of Italy announce that they have organized a committee, with a central office in Milan, to organize an international electrical exposition, to be held at Como, on Lake Como, in May, 1899, to which they invite the cooperation of telegraphers and electricians throughout the world. It is proposed to deposit a bronze crown at the foot of the statue of Volta that his native town long since erected to the celebrated electrician. A more delicate tribute could scarcely be imagined, and the Americans who may be able to

be present at the ceremony will undoubtedly witness one of the most beautiful scenes of this century of centennials.

#### STUDIES OF THE JAPAN CURRENT.

We notice in several California papers earnest articles advocating the study of the Japan current and its relation to the weather of the Pacific coast. Especially does Mr. W. S. Prosser, of Auburn, Cal., state that in 1878 or 1879 he suggested this very thing and urged favorable action on the authorities at Washington.

It ought hardly to be necessary to assure the citizens of the Pacific coast that the Japan Current, like the Gulf Stream, has been studied with much care by the navigators of all nations, and charts have been published showing the temperature and the movement of the surface water, not only for these special currents, but for the whole of the surrounding ocean for each month in the year. These charts show that without any doubt whatever the currents as such soon dwindle away, and all that is left is a very slow movement of the water too and fro with the wind. It is the west wind that strikes our Pacific coast, and not the Japan Current. This wind brings moisture from the Pacific Ocean, and not from the neighborhood of Japan. It is these moist winds, and not the ocean currents that control the climate of California.

The hydrographic offices of all nations are engaged in the study of ocean currents and surface drifts as such, including their dependence upon the winds. The meteorologist studies the winds as affected by the surfaces of the land and ocean, but he finds the atmosphere moving so rapidly and its various portions so easily intermixed with each other that it is at present impossible to tell whether the moisture brought by the wind to California comes from the Pacific Ocean in general, or from the Japan Current especially. In fact, it matters little to him where it comes from. He has to take it as he finds it over California, and then decide whether it is rising and cooling to form cloud and rain, or whether it is descending and likely to stay unprecipitated. The important features of the weather of California depend principally upon whether its winds are descending and being pushed outward from a high and dry area to the northeastward, or whether they are ascending and coming from moister air to the northwestward. It is the air supplied from the high pressure area on the southwest between California and Hawaii that gives the former her long continued spells of dry, clear weather. The length of these spells may depend, in a general way, upon atmospheric conditions; not on the condition of the ocean.

#### METEOROLOGICAL TABLES AND CHARTS.

By A. J. HENRY, Chief of Division of Records and Meteorological Data.

Table I gives, for about 130 Weather Bureau stations making two observations daily and for about 20 others making only one observation, the data ordinarily needed for climatological studies, viz., the monthly mean pressure, the monthly means and extremes of temperature, the average conditions as to moisture, cloudiness, movement of the wind, and the departures from normals in the case of pressure, temperature, and precipitation, the total depth of snowfall, and the mean wet-bulb temperatures. The altitudes of the instruments above ground are also given.

Table II gives, for about 2,700 stations occupied by voluntary observers, the highest maximum and the lowest minimum temperatures, the mean temperature deduced from the average

of all the daily maxima and minima, or other readings, as indicated by the numeral following the name of the station; the total monthly precipitation, and the total depth in inches of any snow that may have fallen. When the spaces in the snow column are left blank it indicates that no snow has fallen, but when it is possible that there may have been snow of which no record has been made, that fact is indicated by leaders, thus ( . . . ).

Table III gives, for about 30 stations furnished by the Canadian Meteorological Service, Prof. R. F. Stupart, director, the means of pressure and temperature, total precipitation and depth of snowfall, and the respective departures from normal values, except in the case of snowfall.

Table IV gives, for 26 stations selected out of 113 that maintain continuous records, the mean hourly temperatures de-

duced from the Richard thermographs described and figured in the Report of the Chief of the Weather Bureau, 1891-92, p. 29.

Table V gives, for 26 stations selected out of 104 that maintain continuous records, the mean hourly pressures as automatically registered by Richard barographs, except for Washington, D. C., where Foreman's barograph is in use. Both instruments are described in the Report of the Chief of the Weather Bureau, 1891-92, pp. 26 and 30.

Table VI gives, for about 130 stations, the arithmetical means of the hourly movements of the wind ending with the respective hours, as registered automatically by the Robinson anemometer, in conjunction with an electrical recording mechanism, described and illustrated in the Report of the Chief of the Weather Bureau, 1891-92, p. 19.

Table VII gives, for all stations that make observations at 8 a. m. and 8 p. m., the four component directions and the resultant directions based on these two observations only and without considering the velocity of the wind. The total movement for the whole month, as read from the dial of the Robinson anemometer, is given for each station in Table I. By adding the four components for the stations comprised in any geographical division the average resultant direction for that division can be obtained.

Table VIII gives the total number of stations in each State from which meteorological reports of any kind have been received, and the number of such stations reporting thunderstorms (T) and auroras (A) on each day of the current month.

Table IX gives, for about 70 stations, the average hourly sunshine (in percentages) as derived from the automatic records made by two essentially different types of instruments, designated, respectively, the thermometric recorder and the photographic recorder. The kind of instrument used at each station is indicated in the table by the letter T or P in the column following the name of the station.

Table X gives a record of rains whose intensity at some period of the storm's continuance equaled or exceeded the following rates:

| Duration, minutes..    | 5    | 10   | 15   | 20   | 25   | 30   | 35   | 40   | 45   | 50   | 60   | 80   | 100  | 120  |
|------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Rates pr. hr. (ins.).. | 3.00 | 1.80 | 1.40 | 1.20 | 1.08 | 1.00 | 0.94 | 0.90 | 0.86 | 0.84 | 0.75 | 0.60 | 0.54 | 0.50 |

In the northern part of the United States, especially in the colder months of the year, rains of the intensities shown in the above table seldom occur. In all cases where no storm of sufficient intensity to entitle it to a place in the full table has occurred, the greatest rainfall of any single storm has been given, also the greatest hourly fall during that storm.

Table XI gives the record of excessive precipitation at all stations from which reports are received.

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#### NOTES EXPLANATORY OF THE CHARTS.

Chart I.—Tracks of centers of high areas. The roman letters show number and order of centers of high areas. The figures within the circles show the days of the month; the letters *a* and *p* indicate, respectively, the 8 a. m. and 8 p. m., seventy-fifth meridian time, observations. The queries (?) on the tracks show that the centers could not be satisfactorily located. Within each circle is given the highest barometric reading reported near the center. A blank indicates that no reports were available. A wavy line indicates the axis of a ridge of high pressure.

Chart II.—Tracks of centers of low areas. The roman letters show number and order of centers of low areas. The figures within the circles show the days of the month; the letters *a* and *p* indicate, respectively, the 8 a. m. and 8 p. m., seventy-fifth meridian time, observations. The queries (?) on the tracks show that the centers could not be satisfactorily located. Within each circle is given the lowest barometric reading reported near the center. A blank indicates that no reports were available. A wavy line indicates the axis of a trough or long oval area of low pressure.

Chart III.—Total precipitation. The scale of shades showing the depth of rainfall is given on the chart itself. For isolated stations the rainfall is given in inches and tenths, when appreciable; otherwise, a "trace" is indicated by a capital T, and no rain at all, by 0.0.

Chart IV.—Sea-level isobars and isotherms, and resultant winds. The wind directions on this Chart are the computed resultants of observations at 8 a. m. and 8 p. m., daily; the resultant duration is shown by figures attached to each arrow. The temperatures are the means of daily maxima and minima and are reduced to sea level. The pressures are the means of 8 a. m. and 8 p. m. observations, daily, and are reduced to sea level and to standard gravity. The reduction for 30 inches of the mercurial barometer, as formerly shown by the marginal figures for each degree of latitude, has already been applied.

Chart V.—Hydrographs for seven principal rivers of the United States.

Chart VI.—Surface temperatures; maximum, minimum, and mean. Lines of equal monthly mean temperature in red; lines of equal maximum temperature in black; and lines of equal minimum temperature (dotted) also in black.

Chart VII.—Percentage of sunshine. The average cloudiness at each Weather Bureau station is determined by numerous personal observations during the day. The difference between the observed cloudiness and 100, it is assumed, represents the percentage of sunshine, and the values thus obtained have been used in preparing Chart VII.

TABLE I.—Climatological data for Weather Bureau Stations, August, 1898.

| Stations.           | Elevation of instruments.        |                            | Pressure, in inches.                 |               | Temperature of the air, in degrees Fahrenheit. |                           |                        |          |       |               |       |          | Precipitation, in inches. |                       | Wind.                 |                                    |                                   |        |                        |                         |                        |                       |                 |                   |             |                     |              |                             |                 |     |     |   |
|---------------------|----------------------------------|----------------------------|--------------------------------------|---------------|--|---------------------------|------------------------|----------|-------|---------------|-------|----------|---------------------------|-----------------------|-----------------------|------------------------------------|-----------------------------------|--------|------------------------|-------------------------|------------------------|-----------------------|-----------------|-------------------|-------------|---------------------|--------------|-----------------------------|-----------------|-----|-----|---|
|                     | Barometer above sea level, feet. | Thermometers above ground. | Mean actual, 8 a.m. and 8 p.m. + 2°. | Mean reduced. | Departure from normal.                         | Mean max. and min., + 2°. | Departure from normal. | Maximum. | Date. | Mean maximum. | Date. | Minimum. | Date.                     | Greatest daily range. | Mean wet thermometer. | Mean temperature of the dew-point. | Mean relative humidity, per cent. | Total. | Departure from normal. | Days with .01, or more. | Total movement, miles. | Prevailing direction. | Miles per hour. | Maximum velocity. | Clear days. | Partly cloudy days. | Cloudy days. | Average cloudiness, tenths. | Total snowfall. |     |     |   |
|                     | Anerometer above ground.         |                            |                                      |               |  |                           |                        |          |       |               |       |          |                           |                       |                       |                                    |                                   |        |                        |                         |                        |                       |                 |                   |             |                     |              |                             |                 |     |     |   |
| New England.        |                                  |                            |                                      |               |  |                           |                        |          |       |               |       |          |                           |                       |                       |                                    |                                   |        |                        |                         |                        |                       |                 |                   |             |                     |              |                             |                 |     |     |   |
| Eastport.           | 76                               | 89                         | 29.87                                | 29.96         | -.01   | 69.7                      | + 2.5                  | 81       | 29    | 69            | 29    | 54       | 25                        | 4.78                  | + 0.8                 | 12                                 | 4,729                             | s.     | 28                     | s.                      | 29                     | 4                     | 9               | 18                | 5           | 5                   | 0            |                             |                 |     |     |   |
| Portland, Me.       | 103                              | 81                         | 29.83                                | 29.93         | -.05   | 89.8                      | + 3.0                  | 88       | 22    | 77            | 54    | 28       | 64                        | 51                    | 3.88                  | + 0.1                              | 15                                | 4,358  | w.                     | 25                      | s.                     | 29                    | 5               | 14                | 12          | 9                   | 6            | 0                           |                 |     |     |   |
| Northfield.         | 872                              | 15                         | 65                                   | 29.06         | 29.97  | -.01                      | 68.0                   | + 3.1    | 85    | 4             | 71    | 39       | 32                        | 55                    | 35                    | 5.22                               | + 0.6                             | 15     | 5,317                  | n.w.                    | 35                     | n.w.                  | 23              | 2                 | 19          | 10                  | 6            | 6.7                         | 0               |     |     |   |
| Boston.             | 125                              | 115                        | 29.85                                | 29.98         | -.01   | 73.1                      | + 4.0                  | 94       | 24    | 81            | 55    | 32       | 60                        | 84                    | 5.23                  | + 0.6                              | 15                                | 5,317  | w.                     | 29                      | n.w.                   | 5                     | 16              | 10                | 5           | 10                  | 5.4          | 0                           |                 |     |     |   |
| Nantucket.          | 14                               | 43                         | 54                                   | 30.00         | 30.01  | -.01                      | 70.6                   | + 2.9    | 82    | 32            | 76    | 56       | 32                        | 66                    | 16                    | 68                                 | 67                                | 93     | 2.20                   | 12                      | 7,062                  | w.                    | 31              | n.w.              | 5           | 16                  | 10           | 6                           | 6.5             | 0   |     |   |
| Woods Hole.         | 22                               | 51                         | 57                                   | 57            | 57   | 57                        | 70.4                   | + 2.2    | 82    | 32            | 74    | 58       | 32                        | 66                    | 20                    | 5.10                               | + 1.2                             | 13     | 9,271                  | s.w.                    | 40                     | n.                    | 5               | 14                | 10          | 7                   | 4            | 4                           | 0               |     |     |   |
| Vineyard Haven.     | 20                               | 51                         | 57                                   | 57            | 57   | 57                        | 73.2                   | + 2.3    | 87    | 32            | 74    | 58       | 32                        | 66                    | 20                    | 4.77                               | + 0.7                             | 10     | 9,034                  | s.w.                    | 37                     | ...                   | 5               | 10                | 14          | 10                  | 7            | 4                           | 6               |     |     |   |
| Block Island.       | 27                               | 39                         | 48                                   | 29.99         | 30.02  | +.01                      | 69.1                   | + 1.6    | 81    | 31            | 74    | 59       | 27                        | 65                    | 67                    | 88                                 | 5.69                              | 4.22   | 14                     | 9,034                   | s.w.                   | 30                    | ...             | 5                 | 10          | 14                  | 10           | 7                           | 4               | 6   |     |   |
| Narragansett.       | 10                               | 51                         | 57                                   | 57            | 57   | 57                        | 71.0                   | + 2.6    | 85    | * 78          | 53    | 28       | 64                        | 23                    | 68                    | 66                                 | 84                                | 6.05   | + 1.5                  | 12                      | 5,178                  | s.w.                  | 30              | n.w.              | 17          | 10                  | 15           | 6                           | 5               | 6.0 | 0   |   |
| New Haven.          | 107                              | 118                        | 140                                  | 29.89         | 30.00  | -.02                      | 75.7                   | + 2.4    | 90    | 31            | 80    | 54       | 35                        | 64                    | 22                    | 68                                 | 66                                | 84     | 6.01                   | + 1.4                   | 12                     | 5,178                 | s.w.            | 30                | n.w.        | 17                  | 10           | 15                          | 6               | 5   | 5.1 | 0 |
| Mid. Atlan. States. |                                  |                            |                                      |               |  |                           |                        |          |       |               |       |          |                           |                       |                       |                                    |                                   |        |                        |                         |                        |                       |                 |                   |             |                     |              |                             |                 |     |     |   |
| Albany.             | 97                               | 84                         | 113                                  | 29.88         | 30.00  | +.01                      | 73.1                   | + 2.6    | 92    | 31            | 82    | 51       | 28                        | 64                    | 27                    | 65                                 | 63                                | 78     | 6.67                   | + 2.6                   | 19                     | 4,634                 | s.              | 36                | w.          | 24                  | 5            | 12                          | 14              | 6   | 6.6 | 0 |
| Binghamton.         | 875                              | 79                         | 90                                   | 29.86         | 29.99  | 30.01                     | - .01                  | 70.4     | + 3.2 | 90            | 24    | 80       | 43                        | 28                    | 60                    | 28                                 | 64                                | 5.48   | + 2.5                  | 15                      | 5,317                  | s.w.                  | 33              | w.                | 17          | 7                   | 16           | 10                          | 8               | 5.7 | 0   |   |
| New York.           | 314                              | 298                        | 926                                  | 29.69         | 30.01  | -.01                      | 74.3                   | + 2.0    | 90    | 31            | 80    | 50       | 28                        | 66                    | 17                    | 65                                 | 78                                | 3.12   | + 1.6                  | 10                      | 7,500                  | s.w.                  | 48              | n.w.              | 17          | 7                   | 16           | 10                          | 5               | 5.8 | 0   |   |
| Harrisburg.         | 377                              | 94                         | 104                                  | 74            | 74   | 74                        | 74.2                   | + 2.1    | 91    | 31            | 82    | 54       | 28                        | 66                    | 22                    | 70                                 | 66                                | 8.44   | + 3.9                  | 13                      | 8,611                  | w.                    | 25              | n.w.              | 3           | 10                  | 11           | 10                          | 5               | 5.5 | 0   |   |
| Philadelphia.       | 117                              | 168                        | 184                                  | 29.90         | 30.02  | -.01                      | 76.8                   | + 3.0    | 93    | 31            | 84    | 60       | 28                        | 69                    | 20                    | 70                                 | 66                                | 75     | 9.06                   | + 4.7                   | 13                     | 6,165                 | s.w.            | 38                | n.w.        | 17                  | 9            | 13                          | 9               | 5   | 5.4 | 0 |
| Atlantic City.      | 52                               | 68                         | 76                                   | 29.98         | 30.03  | +.02                      | 74.2                   | + 2.4    | 91    | 25            | 79    | 60       | 28                        | 69                    | 23                    | 70                                 | 69                                | 87     | 3.99                   | + 0.8                   | 8                      | 7,734                 | s.              | 42                | n.w.        | 5                   | 14           | 13                          | 4               | 4.3 | 0   |   |
| Cape May.           | 24                               | 52                         | 70                                   | 30.02         | 30.04  | -.01                      | 74.3                   | + 1.1    | 93    | 2             | 77    | 65       | 28                        | 69                    | 71                    | 11                                 | 74                                | 4.77   | + 0.8                  | 7                       | 8,734                  | s.                    | 44              | w.                | 5           | 15                  | 13           | 8                           | 3.8             | 0   |     |   |
| Baltimore.          | 123                              | 68                         | 82                                   | 29.89         | 30.02  | -.01                      | 77.4                   | + 2.5    | 95    | 31            | 86    | 59       | 28                        | 68                    | 26                    | 70                                 | 67                                | 74     | 6.09                   | + 2.0                   | 11                     | 3,164                 | s.w.            | 20                | n.          | 18                  | 13           | 12                          | 6               | 4.2 | 0   |   |
| Washington.         | 112                              | 59                         | 76                                   | 29.92         | 30.03  | -.01                      | 76.9                   | + 2.8    | 93    | 8             | 86    | 57       | 28                        | 68                    | 25                    | 70                                 | 68                                | 80     | 7.76                   | + 4.8                   | 8                      | 8,575                 | s.              | 30                | s.          | 4                   | 10           | 9                           | 5               | 5.0 | 0   |   |
| Cape Henry.         | 5                                | 34                         | 34                                   | 29.88         | 30.06  | +.03                      | 79.6                   | + 3.2    | 97    | 25            | 87    | 69       | 28                        | 72                    | 12                    | 25                                 | 71                                | 89     | 8.22                   | + 1.2                   | 10                     | 2,271                 | s.w.            | 22                | se.         | 4                   | 18           | 10                          | 8               | 4.9 | 0   |   |
| Lynchburg.          | 685                              | 83                         | 88                                   | 29.94         | 30.06  | +.03                      | 77.3                   | + 1.9    | 95    | 23            | 86    | 64       | 28                        | 72                    | 22                    | 74                                 | 72                                | 87     | 8.48                   | + 2.4                   | 12                     | 5,211                 | s.w.            | 34                | sw.         | 4                   | 21           | 6                           | 5               | 5.8 | 0   |   |
| Norfolk.            | 57                               | 88                         | 93                                   | 30.01         | 30.07  | +.05                      | 79.6                   | + 3.0    | 94    | 25            | 88    | 65       | 28                        | 70                    | 22                    | 70                                 | 85                                | 6.31   | ...                    | 12                      | 4,405                  | s.                    | 34              | sw.               | 4           | 21                  | 6            | 5                           | 5.8             | 0   |     |   |
| Richmond.           | 144                              | 98                         | 105                                  | 105           | 105  | 105                       | 79.8                   | ...      | 95    | 25            | 88    | 65       | 28                        | 70                    | 22                    | 70                                 | 85                                | 8.81   | + 2.0                  | ...                     | ...                    | ...                   | ...             | ...               | ...         | ...                 | ...          | 6.1                         | 0               |     |     |   |
| S. Atlantic States. |                                  |                            |                                      |               |  |                           |                        |          |       |               |       |          |                           |                       |                       |                                    |                                   |        |                        |                         |                        |                       |                 |                   |             |                     |              |                             |                 |     |     |   |
| Charlotte.          | 773                              | 68                         | 76                                   | 29.26         | 30.05  | +.03                      | 77.2                   | + 1.1    | 92    | 23            | 86    | 65       | 28                        | 73                    | 23                    | 72                                 | 70                                | 86     | 8.74                   | + 3.4                   | 22                     | 4,273                 | s.              | 28                | se.         | 4                   | 17           | 9                           | 6               | 6.4 | 0   |   |
| Hatteras.           | 11                               | 17                         | 36                                   | 30.09         | 30.10  | +.03                      | 79.2                   | + 1.8    | 97    | 24            | 87    | 9        | 84                        | 27                    | 75                    | 74                                 | 85                                | 8.48   | + 0.1                  | 16                      | 7,292                  | s.                    | 32              | sw.               | 10          | 13                  | 7            | 4                           | 4               | 0   |     |   |
| Kittyhawk.          | 9                                | 12                         | 30                                   | 80            | 80   | 80                        | 79.1                   | + 1.5    | 92    | 25            | 86    | 64       | 28                        | 73                    | 20                    | 73                                 | 80                                | 3.13   | + 3.7                  | 11                      | 8,538                  | ...                   | ...             | ...               | 14          | 9                   | 8            | 5.8                         | 0               |     |     |   |
| Raleigh.            | 375                              | 93                         | 101                                  | 29.69         | 30.07  | +.05                      | 78.8                   | + 3.1    | 93    | 25            | 87    | 65       | 28                        | 71                    | 21                    | 72                                 | 71                                | 85     | 5.15                   | + 2.8                   | 21                     | 8,737                 | s.w.            | 25                | sw.         | 4                   | 12           | 15                          | 6               | 6.3 | 0   |   |
| Wilmington.         | 78                               | 82                         | 90                                   | 30.02         | 30.10  | +.08                      | 79.0                   | + 0.8    | 90    | 25            | 85    | 66       | 28                        | 73                    | 16                    | 75                                 | 73                                | 88     | 5.93                   | + 1.5                   | 20                     | 5,200                 | s.w.            | 29                | sw.         | 10                  | 4            | 12                          | 15              | 6.9 | 0   |   |
| Charleston.         | 48                               | 14                         | 92                                   | 30.05         | 30.10  | +.08                      | 80.0                   | + 0.5    | 91    | 24            | 84    | 61       | 28                        | 72                    | 20                    | 73                                 | 72                                | 86     | 9.85                   | + 3.0                   | 17                     | ...                   | ...             | ...               | ...         | ...                 | ...          | ...                         | 5.1             | 0   |     |   |
| Columbia.           | 5                                | 18                         | 30                                   | 30.06         | 30.06  | 0.06                      | 80.0                   | + 1.4    | 94    | 24            | 89    | 69       | 28                        | 73                    | 12                    | 74                                 | 74                                | 86     | 9.25                   | + 4.1                   | 19                     | 3,977                 | s.              | 26                | ne.         | 31                  | 5            | 13                          | 13              | 6.5 | 0   |   |
| Augusta.            | 180                              | 89                         | 103                                  | 29.87         | 30.06  | +.06                      | 79.4                   | 0.0      | 93    | 24            | 87    | 69       | 28                        | 73                    | 22                    | 73                                 | 72                                | 86     | 9.25                   | + 15.0                  | 20                     | 5,644                 | s.              | 26                | n.w.        | 31                  | 6            | 13                          | 12              | 6.6 | 0   |   |
| Savannah.           | 82                               | 68                         | 89                                   | 29.98         | 30.06  | +.03                      | 80.3                   | 0.0      | 92    | 24            | 87    | 69       | 28                        | 73                    | 21                    | 73                                 | 74                                | 86     | 22.79                  | + 15.0                  | 20                     | 5,644                 | s.              | 26                | sw.         | 31                  | 6            | 13                          | 12              | 6.6 | 0   |   |
| Jacksonville.       | 43                               | 69                         | 84                                   | 30.01         | 30.06  | +.04                      | 82.1                   | + 1.0    | 94    | 5             | 90    | 70       | 9                         | 74                    | 81                    | 10                                 | 74                                | 85     | 5.44                   | + 1.0                   | 17                     | 5,705                 | s.              | 26                | se.         | 9                   | 4            | 22                          | 5               | 5.5 | 0   |   |
| Florida Peninsula.  |                                  |                            |                                      |               |  |                           |                        |          |       |               |       |          |                           |                       |                       |                                    |                                   |        |                        |                         |                        |                       |                 |                   |             |                     |              |                             |                 |     |     |   |
| Jupiter.            | 28                               | 13                         | 30                                   | 30.03         | 30.06  | +.01                      | 80.8                   | - 0.2    | 88    | *             | 86    | 71       | 28                        | 72                    | 14                    | 76                                 | 74                                | 81     | 6.62                   | + 1.5                   | 15                     | 7,100                 | se.             | 34                | e.          | 1                   | 12           | 16                          | 8               | 4.5 | 0   |   |
| Key West.           | 22                               | 43                         | 50                                   | 30.03         | 30.05  | 0.04                      | 82.5                   | - 1.4    | 90    | 29            | 88    | 69       | 28                        | 73                    | 22                    | 73                                 | 73                                | 86     | 5.73                   | + 1.0                   | 16                     | 5,231                 | e.              | 25                | ne.         | 6                   | 5            | 23                          | 3               | 5.1 | 0   |   |
| Tampa.              | 36                               | 60                         | 67                                   | 30            | 30.02  | 30.06                     | 0.05                   | 80.8     | - 0.6 | 93            | 17    | 89       | 70                        | 4                     | 73                    | 22                                 | 73                                | 73     | 17.93                  | + 8.4                   | 23                     | 4,348                 | s.              | 30                | se.         | 6                   | 5            | 23                          | 3               | 5.1 | 0   |   |
| East Gulf States.   |                                  |                            |                                      |               |  |                           |                        |          |       |               |       |          |                           |                       |                       |                                    |                                   |        |                        |                         |                        |                       |                 |                   |             |                     |              |                             |                 |     |     |   |
| Shreveport.         | 249                              | 77                         | 84                                   | 29.73         | 29.98  | -.02                      | 81.4                   | + 0.1    | 98    | 23            | 81    | 68       | 14                        | 72                    | 23                    | 73                                 | 71                                | 87     | 6.66                   | + 2.0                   | 20                     | 4,788                 | se.             | 30                | ne.         | 3                   | 1            | 12                          | 18              | 7.5 | 0   |   |
| Fort Smith.         | 481                              | 83                         | 73                                   | 29.47         | 29.96  | -.01                      | 80.4                   | + 2.7    | 92    | 21            | 90    | 66       | 13                        | 70                    | 23                    | 74                                 | 73                                | 80     | 18.58                  | + 10.2                  | 22                     | 5,760                 | s.w.            | 40                | sw.         | 10                  | 0            | 20                          | 11              | 6.7 | 0   |   |
| Little Rock.        | 302                              | 71                         | 79                                   | 29.68         | 30.00  | 0.00                      | 80.2                   | + 2.0    | 98    | 23            | 90    | 68       | 5                         | 71                    | 23                    | 74                                 | 72                                | 87     | 5.12                   | + 2.5                   | 20                     | 5,362                 | n.              | 26                | sw.         | 17                  | 10           | 18                          | 3               | 4.5 | 0   |   |
| Corpus Christi.     | 20                               | 42                         | 49                                   | 29.95         | 30.97  | -.03                      | 82.5                   | + 1.1    | 9     |               |       |          |                           |                       |                       |                                    |                                   |        |                        |                         |                        |                       |                 |                   |             |                     |              |                             |                 |     |     |   |

TABLE I.—*Climatological data for Weather Bureau Stations, August, 1898—Continued.*

| Stations.                | Elevation of instruments<br>Barometer above sea level, feet. | Pressure, in inches.       |                        | Temperature of the air, in degrees Fahrenheit.                   |                        |          |       |               |       |                                |               |       |                                   |        |                        | Wind.                   |                        |                                    |                 |                         |       |       |       |     |                     |     |    |    |     |     |     |
|--------------------------|--|----------------------------|------------------------|--|------------------------|----------|-------|---------------|-------|--------------------------------|---------------|-------|-----------------------------------|--------|------------------------|-------------------------|------------------------|------------------------------------|-----------------|-------------------------|-------|-------|-------|-----|---------------------|-----|----|----|-----|-----|-----|
|                          |  | Thermometers above ground. |                        | Mean actual, 8 a.m. and 3 p.m. + 2.<br>Anemometers above ground. |                        |          |       |               |       | Mean maximum and minimum, + 2. |               |       |                                   |        |                        | Mean wet thermometer.   |                        | Mean temperature of the dew-point. |                 | Days with 0.1, or more. |       |       |       |     |                     |     |    |    |     |     |     |
|                          |  | Mean reduced.              | Departure from normal. | Mean max. and min. + 2.  | Departure from normal. | Maximum. | Date. | Mean maximum. | Date. | Greatest daily range.          | Mean minimum. | Date. | Mean relative humidity, per cent. | Total. | Departure from normal. | Days with 0.1, or more. | Total movement, miles. | Prevailing direction.              | Miles per hour. | Direction.              | Date. |       |       |     |                     |     |    |    |     |     |     |
| Up. Miss. Val.—Con.      |  |                            |                        |  |                        |          |       |               |       |                                |               |       |                                   |        |                        |                         |                        |                                    |                 |                         |       |       |       |     |                     |     |    |    |     |     |     |
| Dubuque.                 | 698  | 101                        | 109                    | 29.22  | 29.95                  | — .05    | 71.2  | — 0.4         | 92    | 22                             | 81            | 53    | 4                                 | 62     | 29                     | 64                      | 61                     | 75                                 | 4.37            | + 1.2                   | 11    | 4,800 | n.w.  | 27  | n.                  | 15  | 13 | 11 | 7   | 4.3 |     |
| Keokuk.                  | 614  | 64                         | 78                     | 29.32  | 29.96                  | — .03    | 75.7  | + 1.2         | 93    | 23                             | 84            | 56    | 4                                 | 67     | 26                     | 68                      | 64                     | 74                                 | 6.92            | + 4.1                   | 7     | 4,555 | s.w.  | 20  | Clear days.         | 17  | 17 | 10 | 4   | 4.2 |     |
| Cairo.                   | 350  | 87                         | 93                     | 29.62  | 29.99                  | — .04    | 78.0  | + 1.0         | 92    | 24                             | 86            | 62    | 4                                 | 70     | 23                     | 71                      | 85                     | 71                                 | 3.56            | + 0.7                   | 9     | 3,525 | s.    | 36  | Partly cloudy days. | 24  | 15 | 13 | 8   | 3.8 |     |
| Springfield, Ill.        | 644  | 82                         | 92                     | 29.81  | 29.98                  | — .04    | 74.6  | + 1.2         | 94    | 23                             | 84            | 58    | 12                                | 66     | 30                     | 67                      | 64                     | 71                                 | 4.40            | + 2.0                   | 12    | 4,347 | s.w.  | 22  | Cloudy days.        | 14  | 10 | 13 | 8   | 5.1 |     |
| Hannibal.                | 534  | 75                         | 107                    | 29.58  | 29.95                  | — .04    | 75.8  | + 1.6         | 96    | 23                             | 85            | 56    | 12                                | 66     | 29                     | 67                      | 71                     | 1.05                               | + 0.9           | 7                       | 5,542 | s.w.  | 25    | 2.3 | 14                  | 18  | 11 | 6  | 3.2 |     |     |
| St. Louis.               | 567  | 111                        | 210                    | 29.40  | 30.00                  | + .01    | 78.4  | + 1.6         | 95    | 21                             | 86            | 63    | 4                                 | 70     | 23                     | 72                      | 69                     | 79                                 | 0.47            | + 2.6                   | 7     | 5,240 | s.    | 25  | 2.3                 | 16  | 7  | 7  | 3.3 |     |     |
| <i>Missouri Valley.</i>  |  |                            |                        |  |                        |          |       |               |       |                                |               |       |                                   |        |                        |                         |                        |                                    |                 |                         |       |       |       |     |                     |     |    |    |     |     |     |
| Columbia.                | 4  | 84                         | ...                    | 27.70  | 29.97                  | — .05    | 77.0  | + 1.9         | 99    | 23                             | 89            | 52    | 4                                 | 65     | 34                     | ...                     | ...                    | 0.47                               | + 2.3           | 6                       | 4,350 | s.    | 18    | w.  | 21                  | 16  | 7  | 8  | 4.0 |     |     |
| Kansas City.             | 903  | 78                         | 95                     | 28.98  | 29.97                  | — .02    | 77.2  | + 1.5         | 96    | 23                             | 86            | 59    | 1                                 | 62     | 23                     | 66                      | 60                     | 73                                 | 5.01            | + 1.1                   | 6     | 5,591 | s.e.  | 24  | ...                 | 15  | 18 | 10 | 3   | 2.9 |     |
| Springfield, Mo.         | 1,324  | 100                        | 108                    | 28.63  | 29.99                  | — .04    | 75.1  | + 1.1         | 90    | 23                             | 84            | 58    | 4                                 | 67     | 21                     | 69                      | 66                     | 80                                 | 3.81            | + 1.6                   | 6     | 4,971 | s.e.  | 24  | ...                 | 31  | 11 | 18 | 1   | 3.7 |     |
| Topeka.                  | 81   | ...                        | ...                    | 27.66  | 29.98                  | — .05    | 76.6  | + 2.8         | 98    | 29                             | 88            | 55    | 3                                 | 67     | 26                     | 66                      | 62                     | 66                                 | 3.45            | + 0.4                   | 6     | 6,678 | s.    | 33  | n.w.                | 15  | 24 | 6  | 1   | 2.4 |     |
| Lincoln.                 | 1,199  | 74                         | 84                     | 28.68  | 29.92                  | — .05    | 78.3  | + 2.7         | 101   | 20                             | 89            | 48    | 1                                 | 64     | 35                     | 66                      | 62                     | 68                                 | 1.98            | + 1.4                   | 5     | 5,065 | s.e.  | 24  | ...                 | 24  | 16 | 12 | 4   | 2.6 |     |
| Omaha.                   | 1,108  | 92                         | 97                     | 28.79  | 29.92                  | — .05    | 76.4  | + 2.7         | 100   | 20                             | 86            | 55    | 1                                 | 66     | 24                     | 66                      | 60                     | 66                                 | 3.10            | + 0.7                   | 3     | 7,707 | s.    | 33  | ...                 | 16  | 9  | 6  | 3.5 |     |     |
| Sioux City.              | 1,139  | 96                         | 164                    | 28.83  | 29.88                  | — .06    | 74.4  | + 1.6         | 105   | 27                             | 88            | 52    | 11                                | 60     | 44                     | 61                      | 53                     | 54                                 | 0.78            | + 0.9                   | 4     | 4,275 | s.e.  | 60  | n.w.                | 16  | 19 | 9  | 2   | 3.7 |     |
| Pierre.                  | 1,460  | 50                         | 62                     | 28.39  | 29.90                  | — .05    | 71.2  | + 2.8         | 102   | 20                             | 86            | 46    | 12                                | 57     | 46                     | 60                      | 54                     | 63                                 | 0.46            | + 2.1                   | 4     | 7,469 | s.    | 38  | ...                 | 27  | 20 | 9  | 1   | 3.5 |     |
| Huron.                   | 1,306  | 55                         | 67                     | 28.54  | 29.90                  | — .05    | 73.2  | + 1.4         | 100   | 20                             | 85            | 52    | 27                                | 62     | 37                     | ...                     | ...                    | 43                                 | 0.65            | + 0.7                   | 7     | 5,295 | s.    | 30  | sw.                 | 18  | 12 | 1  | 3   | 3.6 |     |
| Yankton.                 | 1,234  | 52                         | 58                     | 28.79  | 29.96                  | — .02    | 70.4  | + 2.6         | 100   | 20                             | 85            | 50    | 12                                | 66     | 32                     | 62                      | 60                     | 40                                 | 62              | 1.71                    | + 1.4 | 7     | 5,025 | s.  | 36                  | ... | 31 | 21 | 8   | 2   | 3.1 |
| <i>Northern Slope.</i>   |  |                            |                        |  |                        |          |       |               |       |                                |               |       |                                   |        |                        |                         |                        |                                    |                 |                         |       |       |       |     |                     |     |    |    |     |     |     |
| Havre.                   | 2,494  | 46                         | 47                     | 27.80  | 29.82                  | — .09    | 73.1  | + 4.5         | 97    | 20                             | 85            | 43    | 3                                 | 55     | 44                     | 56                      | 46                     | 51                                 | 0.10            | + 1.3                   | 3     | 5,949 | w.    | 60  | ...                 | 21  | 21 | 7  | 3   | 2.6 |     |
| Miles City.              | 2,373  | 41                         | 49                     | 27.42  | 29.82                  | — .08    | 73.8  | + 2.1         | 102   | 20                             | 85            | 52    | 3                                 | 60     | 42                     | 60                      | 51                     | 36                                 | 0.12            | + 0.9                   | 3     | 4,181 | n.    | 27  | ...                 | 22  | 18 | 10 | 3   | 3.2 |     |
| Helena.                  | 4,108  | 88                         | 93                     | 25.86  | 29.99                  | + .03    | 69.0  | + 2.5         | 93    | 12                             | 82            | 46    | 3                                 | 58     | 36                     | 53                      | 38                     | 40                                 | 0.71            | + 0.1                   | 5     | 4,809 | s.w.  | 27  | n.w.                | 21  | 18 | 9  | 4   | 3.4 |     |
| Rapid City.              | 3,251  | 46                         | 50                     | 26.31  | 29.85                  | — .06    | 72.8  | + 2.9         | 102   | 20                             | 85            | 51    | 2                                 | 61     | 41                     | 57                      | 44                     | 43                                 | 0.72            | + 0.6                   | 6     | 5,533 | w.    | 36  | ...                 | 27  | 10 | 17 | 4   | 4.3 |     |
| Cheyenne.                | 6,105  | 58                         | 60                     | 24.11  | 29.88                  | — .03    | 67.9  | + 2.9         | 91    | 21                             | 83            | 42    | 2                                 | 53     | 40                     | 52                      | 39                     | 45                                 | 0.90            | + 0.7                   | 6     | 5,775 | n.w.  | 38  | sw.                 | 4   | 12 | 18 | 1   | 3.8 |     |
| Lander.                  | 5,372  | 29                         | 36                     | 24.72  | 29.96                  | + .02    | 65.6  | + 0.8         | 92    | 21                             | 82            | 45    | 2                                 | 49     | 45                     | 53                      | 42                     | 52                                 | 0.82            | + 0.2                   | 5     | 5,889 | s.w.  | 35  | ...                 | 29  | 11 | 5  | 4   | 5.7 |     |
| North Platte.            | 2,826  | 43                         | 52                     | 27.06  | 29.91                  | — .04    | 73.8  | + 2.4         | 101   | 20                             | 86            | 50    | 12                                | 66     | 32                     | 62                      | 57                     | 66                                 | 1.40            | + 1.0                   | 7     | 6,025 | s.    | 36  | ...                 | 31  | 21 | 8  | 2   | 3.1 |     |
| <i>Middle Slope.</i>     |  |                            |                        |  |                        |          |       |               |       |                                |               |       |                                   |        |                        |                         |                        |                                    |                 |                         |       |       |       |     |                     |     |    |    |     |     |     |
| Denver.                  | 5,290  | 79                         | 151                    | 24.81  | 29.91                  | + .02    | 76.6  | + 2.5         | 95    | 4                              | 87            | 50    | 1                                 | 58     | 37                     | 56                      | 44                     | 45                                 | 0.55            | + 0.5                   | 6     | 5,374 | s.w.  | 40  | sw.                 | 23  | 14 | 15 | 2   | 4.0 |     |
| Pueblo.                  | 4,713  | 74                         | 81                     | 25.92  | 29.90                  | — .02    | 74.1  | + 1.8         | 98    | 20                             | 90            | 52    | 12                                | 58     | 43                     | 56                      | 44                     | 45                                 | 0.54            | + 1.5                   | 7     | 4,899 | n.w.  | 38  | n.                  | 15  | 17 | 13 | 1   | 3.4 |     |
| Concordia.               | 1,399  | 42                         | 47                     | 28.47  | 29.90                  | — .02    | 74.4  | + 5.0         | 104   | 20                             | 89            | 50    | 1                                 | 66     | 35                     | 67                      | 61                     | 61                                 | 1.03            | + 1.9                   | 6     | 4,999 | s.    | 24  | ...                 | 13  | 18 | 13 | 0   | 3.5 |     |
| Dodge.                   | 2,504  | 44                         | 52                     | 27.40  | 29.91                  | — .03    | 77.8  | + 2.6         | 100   | 16                             | 91            | 58    | 2                                 | 65     | 32                     | 65                      | 59                     | 62                                 | 2.26            | + 0.6                   | 6     | 5,562 | s.    | 31  | s.                  | 31  | 23 | 8  | 0   | 1.9 |     |
| Wichita.                 | 1,351  | 78                         | 85                     | 28.56  | 29.95                  | + .01    | 77.3  | + 0.8         | 96    | 29                             | 98            | 57    | 11                                | 66     | 38                     | 68                      | 64                     | 70                                 | 2.78            | + 0.8                   | 4     | 4,948 | s.    | 24  | n.                  | 18  | 24 | 4  | 3   | 2.2 |     |
| Oklahoma.                | 1,218  | 54                         | 62                     | 28.71  | 29.97                  | + .02    | 78.2  | + 1.2         | 97    | 19                             | 88            | 59    | 12                                | 68     | 27                     | 70                      | 67                     | 75                                 | 2.82            | + 0.3                   | 6     | 5,779 | s.    | 30  | sw.                 | 24  | 7  | 0  | 1   | 3.2 |     |
| <i>Southern Slope.</i>   |  |                            |                        |  |                        |          |       |               |       |                                |               |       |                                   |        |                        |                         |                        |                                    |                 |                         |       |       |       |     |                     |     |    |    |     |     |     |
| Abilene.                 | 1,749  | 45                         | 54                     | 28.19  | 29.96                  | — .01    | 81.1  | + 0.9         | 98    | 19                             | 92            | 61    | 13                                | 70     | 31                     | 67                      | 60                     | 57                                 | 1.94            | + 0.2                   | 7     | 5,387 | se.   | 36  | ne.                 | 19  | 15 | 10 | 6   | 4.0 |     |
| Amarillo.                | 3,691  | 54                         | 61                     | 26.31  | 29.96                  | — .00    | 74.0  | + 1.1         | 92    | 23                             | 86            | 59    | 1                                 | 62     | 29                     | 63                      | 56                     | 61                                 | 4.03            | + 1.1                   | 5     | 9,319 | s.    | 46  | se.                 | 2   | 24 | 5  | 2   | 2.5 |     |
| <i>Southern Plateau.</i> |  |                            |                        |  |                        |          |       |               |       |                                |               |       |                                   |        |                        |                         |                        |                                    |                 |                         |       |       |       |     |                     |     |    |    |     |     |     |
| El Paso.                 | 3,767  | 10                         | 110                    | 26.19  | 29.89                  | — .00    | 78.5  | + 0.5         | 95    | 2                              | 90            | 60    | 14                                | 67     | 32                     | 63                      | 55                     | 52                                 | 1.00            | + 0.8                   | 6     | 6,443 | e.    | 42  | n.w.                | 1   | 14 | 15 | 2   | 4.0 |     |
| Santa Fe.                | 6,998  | 47                         | 50                     | 23.39  | 29.95                  | — .02    | 67.8  | + 1.5         | 85    | 2                              | 79            | 52    | 10                                | 57     | 31                     | 54                      | 45                     | 52                                 | 4.00            | + 1.4                   | 12    | 4,292 | se.   | 25  | s.                  | 22  | 15 | 12 | 4   | 4.5 |     |
| Phenix.                  | 1,076  | 47                         | 57                     | 28.70  | 29.78                  | — .02    | 89.8  | + 1.6         | 109   | 18                             | 101           | 71    | 4                                 | 78     | 30                     | 70                      | 60                     | 64                                 | 1.03            | + 0.1                   | 9     | 3,411 | n.w.  | 40  | e.                  | 26  | 20 | 15 | 4   | 4.0 |     |
| Yuma.                    | 139  | 16                         | 50                     | 29.60  | 29.74                  | — .04    | 91.4  | + 0.7         | 113   | 18                             | 103           | 74    | 18                                | 80     | 39                     | 74                      | 67                     | 51                                 | 0.19            | + 0.2                   | 5     | 5,124 | sw.   | 44  | n.                  | 10  | 25 | 4  | 1   | 3.3 |     |
| Independence.            | 8,907  | 10                         | 58                     | 29.54  | 29.73                  | — .10    | 80.1  | + 2.5         | 104   | 1                              | 93            | 54    | 31                                | 67     | 33                     | 55                      | 31                     | 54                                 | 0.54            | + 0.2                   | 3     | 5,833 | n.w.  | 30  | ...                 | 29  | 26 | 4  | 1   | 3.3 |     |
| <i>Middle Plateau.</i>   |  |                            |                        |  |                        |          |       |               |       |                                |               |       |                                   |        |                        |                         |                        |                                    |                 |                         |       |       |       |     |                     |     |    |    |     |     |     |
| Carson City.             | 4,720  | 82                         | 92                     | 25.25  | 29.86                  | — .00    | 70.8  | + 3.8         | 100   | 1                              | 88            | 43    | 19                                | 53     | 44                     | 51                      | 33                     | 31                                 | 18              | 0.00                    | 1     | 4,597 | w.    | 40  | s.                  | 12  | 19 | 12 | 0   | 2.4 |     |
| Winnemucca.              | 4,340  | 59                         | 70                     | 25.62  | 29.84                  | — .02    | 72.7  | + 2.1         | 100   | 10                             | 90            | 41    | 20                                | 56     | 47                     | 51                      | 36                     | 29                                 | 0.09            | 0.0                     | 1     | 4,259 | w.    | 45  | ...                 | 26  | 20 | 11 | 0   | 2.5 |     |
| Salt Lake City.          | 4,344  | 63                         | 90                     | 25.63  | 29.85                  | — .03    | 76.8  | + 2.2         | 97    | 26                             | 90            | 58    | 24                                | 64     | 34                     | 59                      | 44                     | 44                                 | 1.35            | + 0.6                   | 4     | 4,486 | se.   | 29  | n.w.                | 30  | 10 | 17 | 4   | 5.1 |     |
| <i>Northern Plateau.</i> |  |                            |                        |  |                        |          |       |               |       |                                |               |       |                                   |        |                        |                         |                        |                                    |                 |                         |       |       |       |     |                     |     |    |    |     |     |     |
| Baker City.              | 8,470  | 49                         | 55                     | 26.40  | 29.85                  | — .09    | 70.6  | + 4.5         | 101   | 10                             | 86            | 46    | 22                                | 55     | 40                     | 52                      | 35                     | 34                                 | 0.31            | + 0.1                   | 4     | 3,785 | s.    | 23  | n.w.                | 29  | 18 | 7  | 6   | 3.0 |     |
| Idaho Falls.             | 4,742  | 10                         | 56                     | 25.25  | 29.89                  | — .01    | 69.6  | + 2.0         | 95    | 1</                            |               |       |                                   |        |                        |                         |                        |                                    |                 |                         |       |       |       |     |                     |     |    |    |     |     |     |

Partial reports for August, 1898, were received from the following stations recently established in the West Indies: Basseterre, St. Kitts Island; Bridgetown, Barbados.

Partial reports for August, 1898, were received from the following stations recently established in the West Indies: Basseterre, St. Kitts Island; Bridgetown, Barbados; Willemstad, Curacao; Santiago de Cuba, Cuba; Santo Domingo, Santo Domingo; also a report of the temperature at 7 a. m., 2 and 9 p. m., maximum and minimum from Guayama, Puerto Rico, from August 19 to 31, inclusive, by Lieut. Col. W. A. Glassford, Signal Corps, U. S. A. Reports from the above stations, with others that have been established, will be published as a part of this table in future.

TABLE II.—*Meteorological record of voluntary and other cooperating observers, August, 1898.*

| Stations.                          | Temperature.<br>(Fahrenheit.) |          |       | Precipita-<br>tion.      |                         | Stations.                            | Temperature.<br>(Fahrenheit.) |                 |                   | Precipita-<br>tion.      |                         | Stations.                          | Temperature.<br>(Fahrenheit.) |          |       | Precipita-<br>tion.      |                         |
|------------------------------------|-------------------------------|----------|-------|--------------------------|-------------------------|--------------------------------------|-------------------------------|-----------------|-------------------|--------------------------|-------------------------|------------------------------------|-------------------------------|----------|-------|--------------------------|-------------------------|
|                                    | Maximum.                      | Minimum. | Mean. | Rain and melted<br>snow. | Total depth of<br>snow. |                                      | Maximum.                      | Minimum.        | Mean.             | Rain and melted<br>snow. | Total depth of<br>snow. |                                    | Maximum.                      | Minimum. | Mean. | Rain and melted<br>snow. | Total depth of<br>snow. |
| <i>Alabama.</i>                    |                               |          |       |                          |                         | <i>Arizona—Cont'd.</i>               |                               |                 |                   |                          |                         | <i>California—Cont'd.</i>          |                               |          |       |                          |                         |
| Aloo <sup>t</sup> .....            | 98                            | 65       | 77.6  | ○                        | Ins.                    | Snowflake.....                       | 94                            | ○               | 53                | 72.6                     | ○                       | Dunnigan <sup>*1</sup> .....       | ○                             | ○        | ○     | Ins.                     | Ins.                    |
| Asville <sup>t</sup> .....         | 95                            | 64       | 77.8  | 3.50                     |                         | Strawberry.....                      | 91                            | 51              | 70.1              | 3.82                     |                         | Durham <sup>*1</sup> .....         | 110                           | 57       | 81.6  | 0.00                     |                         |
| Bermuda <sup>t</sup> .....         | 92                            | 69       | 79.0  | 14.21                    |                         | Sulphur Spring Valley.....           | .....                         | .....           | .....             | 2.97                     |                         | East Brother L. H. ....            | .....                         | .....    | ..... | 0.00                     |                         |
| Birmingham <sup>t</sup> .....      | 98                            | 68       | 80.0  | 8.57                     |                         | Texas Hill <sup>*1</sup> .....       | 118                           | 75              | 96.5              | 1.47                     |                         | Edmonton <sup>*1</sup> .....       | 96                            | 43       | 66.8  | T.                       |                         |
| Bridgeport <sup>t</sup> .....      | .....                         | .....    | ..... | 2.04                     |                         | Tombstone.....                       | 95                            | 61              | 75.7              | 3.68                     |                         | Elsinore.....                      | 115                           | 51       | 82.2  | 0.00                     |                         |
| Citronelle <sup>t</sup> .....      | 91                            | 71       | 78.8  | 8.89                     |                         | Tucson <sup>t</sup> .....            | 106                           | 66              | 84.8              | 3.94                     |                         | Escondido.....                     | 110                           | 50       | 74.6  | 0.00                     |                         |
| Cianton <sup>t</sup> .....         | 91                            | 62       | 77.1  | 3.24                     |                         | Walnut Grove.....                    | .....                         | .....           | .....             | 2.33                     |                         | Fallbrook <sup>*1</sup> .....      | 105                           | 60       | 73.9  | T.                       |                         |
| Daphne.....                        | 98                            | 68       | 81.4  | 14.52                    |                         | White Hills.....                     | 109                           | 70              | 90.4              | 1.77                     |                         | Folsom City <sup>*1</sup> .....    | 110                           | 60       | 77.5  | T.                       |                         |
| Decatur <sup>t</sup> .....         | 98                            | 62       | 78.6  | 3.17                     |                         | Willcox <sup>*1</sup> .....          | 89                            | 70              | 78.4              | 1.55                     |                         | Fordyce Dam.....                   | .....                         | .....    | ..... | 0.31                     |                         |
| Demopolis.....                     | .....                         | .....    | ..... | 7.25                     |                         | <i>Arkansas.</i>                     |                               |                 |                   |                          |                         | Fort Bragg.....                    | .....                         | .....    | ..... | 0.00                     |                         |
| Elba.....                          | 98                            | 66       | 77.8  | 10.90                    |                         | Amity.....                           | 94                            | 62              | 78.4              | 3.91                     |                         | Fort Rorie.....                    | 99                            | 42       | 65.7  | 0.00                     |                         |
| Eufaula <sup>a†</sup> .....        | 96                            | 65       | 79.2  | 11.99                    |                         | Beebranch.....                       | 98 <sup>d</sup>               | 59 <sup>d</sup> | 78.2 <sup>d</sup> | 4.40                     |                         | Fort Ross.....                     | 75                            | 45       | 57.4  | 0.00                     |                         |
| Evergreen.....                     | 99                            | 67       | 79.0  | 13.52                    |                         | Blanchard Springs <sup>t</sup> ..... | 97                            | 61              | 79.6              | 3.72                     |                         | Glendora.....                      | .....                         | .....    | ..... | 0.00                     |                         |
| Florence <sup>a†</sup> .....       | .....                         | .....    | ..... | 4.03                     |                         | Brinkley.....                        | 96 <sup>e</sup>               | 63 <sup>e</sup> | 79.4 <sup>e</sup> | 2.45                     |                         | Goshen <sup>*1</sup> .....         | 109                           | 57       | 85.2  | 0.00                     |                         |
| Florence <sup>b†</sup> .....       | 95                            | 59       | 79.2  | 4.34                     |                         | Camden <sup>a†</sup> .....           | 97                            | 60              | 81.1              | 2.78                     |                         | Grand Island <sup>*6</sup> .....   | 112                           | 55       | 62.5  | 0.00                     |                         |
| Fort Deposit.....                  | 94                            | 60       | 76.6  | 10.22                    |                         | Camden <sup>b†</sup> .....           | .....                         | .....           | .....             | .....                    |                         | Grass Valley.....                  | .....                         | .....    | ..... | T.                       |                         |
| Gadsden.....                       | 96                            | 64       | 77.4  | 3.97                     |                         | Canton <sup>*1</sup> .....           | 98                            | 60              | 78.9              | .....                    |                         | Greenville <sup>t</sup> .....      | 103                           | 29       | 66.0  | T.                       |                         |
| Goodwater.....                     | 97                            | 64       | 78.8  | 9.02                     |                         | Conway.....                          | 108                           | 61              | 82.2              | 1.86                     |                         | Healdsburg <sup>*1</sup> .....     | 110                           | 40       | 65.0  | 0.00                     |                         |
| Greensboro <sup>t</sup> .....      | 98                            | 69       | 79.1  | 5.06                     |                         | Corning.....                         | 98                            | 57              | 78.2              | 4.67                     |                         | Hill Ranch.....                    | 116                           | 45       | 77.2  | 0.00                     |                         |
| Hamilton.....                      | 99                            | 61       | 79.2  | 2.95                     |                         | Dallas.....                          | 96                            | 61              | 78.3              | 6.36                     |                         | Hollister.....                     | 103                           | 43       | 65.8  | 0.00                     |                         |
| Healing Springs.....               | 94                            | 66       | 78.7  | 11.30                    |                         | Dardanelle.....                      | .....                         | .....           | .....             | .....                    |                         | Hueneme (near) <sup>*</sup> .....  | 84                            | 50       | 66.6  | 0.00                     |                         |
| Highland Home <sup>t</sup> .....   | 91                            | 69       | 74.4  | 9.81                     |                         | Elon <sup>t</sup> .....              | 97                            | 62              | 80.4              | 4.78                     |                         | Humboldt L. H. ....                | .....                         | .....    | ..... | 0.00                     |                         |
| Livingston.....                    | 95                            | 68       | 80.8  | 3.82                     |                         | Fayetteville <sup>t</sup> .....      | 95                            | 55              | 78.2              | 4.48                     |                         | Hydesville.....                    | 72                            | 44       | 58.2  | 0.11                     |                         |
| Lock No. 4.....                    | 98                            | 65       | 78.3  | .....                    |                         | Forrest.....                         | 96                            | 61              | 79.9              | 3.61                     |                         | Indio <sup>*1</sup> .....          | 113                           | 78       | 98.1  | 0.30                     |                         |
| Madison Station <sup>t</sup> ..... | 94                            | 61       | 76.6  | 4.75                     |                         | Fulton <sup>t</sup> .....            | .....                         | .....           | .....             | .....                    |                         | Iowa Hill <sup>*1</sup> .....      | 100                           | 58       | 74.4  | 0.00                     |                         |
| Maplegrove.....                    | 94                            | 65       | 78.0  | 4.77                     |                         | Hardy.....                           | 97                            | 60              | 78.2              | 3.09                     |                         | Jackson.....                       | 106                           | 52       | 77.2  | 0.00                     |                         |
| Marion <sup>t</sup> .....          | 95                            | 68       | 80.2  | 12.20                    |                         | Helena <sup>a†</sup> .....           | 100                           | 65              | 82.4              | 3.45                     |                         | Jolon.....                         | .....                         | .....    | ..... | 0.00                     |                         |
| Mount Willing <sup>t</sup> .....   | 98                            | 70       | 80.4  | 7.57                     |                         | Helena <sup>b†</sup> .....           | 99                            | 64              | 81.2              | 3.45                     |                         | Keene <sup>*1</sup> .....          | 105                           | 53       | 72.9  | 0.00                     |                         |
| Newbern <sup>t</sup> .....         | 94                            | 67       | 79.7  | 5.79                     |                         | Hot Springs <sup>a</sup> .....       | 99                            | 64              | 81.2              | 3.51                     |                         | Kennedy Gold Mine.....             | 108                           | 49       | 75.4  | 0.00                     |                         |
| Newburg.....                       | 95                            | 62       | 78.6  | 4.05                     |                         | Hot Springs <sup>b</sup> .....       | .....                         | .....           | .....             | .....                    |                         | Kernville.....                     | .....                         | .....    | ..... | 0.00                     |                         |
| Newton <sup>t</sup> .....          | 94                            | 64       | 74.8  | .....                    |                         | Jonesboro.....                       | 95                            | 60              | 77.0              | 8.42                     |                         | King City <sup>*1</sup> .....      | 104                           | 48       | 65.2  | 0.00                     |                         |
| Ocoee <sup>t</sup> .....           | 91                            | 64       | 75.5  | 5.25                     |                         | Keesee Ferry <sup>t</sup> .....      | 96                            | 57              | 77.6              | 6.03                     |                         | Kingsburg <sup>*1</sup> .....      | 108                           | 62       | 86.2  | 0.00                     |                         |
| Opelika <sup>t</sup> .....         | 95                            | 64       | 78.8  | 9.30                     |                         | Lacrosse <sup>t</sup> .....          | 98                            | 60              | 78.0              | 5.14                     |                         | Lagrange <sup>*1</sup> .....       | 116                           | 55       | 84.8  | 0.00                     |                         |
| Oxanna <sup>t</sup> .....          | 90                            | 64       | 74.8  | 8.15                     |                         | Lonoke <sup>*1</sup> .....           | 102                           | 66              | 80.6              | 2.75                     |                         | Laporte <sup>*1</sup> .....        | 90                            | 43       | 62.6  | 0.04                     |                         |
| Pineapple.....                     | 102                           | 67       | 80.8  | 5.87                     |                         | Lutherford <sup>*1</sup> .....       | 92                            | 69              | 79.6              | .....                    |                         | Las Fuentes Ranch.....             | .....                         | .....    | ..... | 0.00                     |                         |
| Pushmataha <sup>t</sup> .....      | 96                            | 69       | 80.1  | 8.20                     |                         | Malvern <sup>t</sup> .....           | 100                           | 80              | 80.7              | 2.49                     |                         | Lemoore <sup>a†</sup> .....        | 110                           | 59       | 83.2  | 0.00                     |                         |
| Riverton <sup>t</sup> .....        | 98                            | 60       | 80.0  | 1.02                     |                         | Marietta <sup>t</sup> .....          | 98                            | 70              | 81.6              | .....                    |                         | Lick Observatory.....              | 91                            | 52       | 71.2  | 0.00                     |                         |
| Rockmills.....                     | 93                            | 65       | 77.4  | .....                    |                         | Marvell.....                         | 99                            | 64              | 80.7              | 2.77                     |                         | Limekiln.....                      | 112                           | 54       | 82.0  | 0.06                     |                         |
| Scottsboro <sup>t</sup> .....      | 92                            | 63       | 77.6  | 3.53                     |                         | Mena <sup>*1</sup> .....             | 96                            | 63              | 78.0              | 6.12                     |                         | Lime Point L. H. ....              | .....                         | .....    | ..... | 0.00                     |                         |
| Selma <sup>t</sup> .....           | 97                            | 65       | 81.8  | 6.42                     |                         | Monticello.....                      | 100                           | 62              | 82.7              | 6.32                     |                         | Lodi.....                          | 108                           | 52       | 74.4  | 0.00                     |                         |
| Sturdevant.....                    | .....                         | .....    | ..... | 8.80                     |                         | Moore.....                           | .....                         | .....           | .....             | .....                    |                         | Los Gatos <sup>b</sup> .....       | 97                            | 48       | 67.2  | 0.00                     |                         |
| Talladega.....                     | 92                            | 66       | 78.4  | 7.65                     |                         | Mosserville.....                     | 90                            | 59              | 75.0              | 4.99                     |                         | Lytton Springs.....                | 104                           | 49       | 70.1  | 0.00                     |                         |
| Tallassee.....                     | .....                         | .....    | ..... | 7.40 <sup>a</sup>        |                         | Mount Nebo.....                      | 88                            | 61              | 76.2              | 4.29                     |                         | Malakoff Mine.....                 | 99                            | 47       | 72.8  | T.                       |                         |
| Thomasville.....                   | 100                           | 65       | 80.7  | 1.89                     |                         | New Gascony.....                     | 96                            | 61              | 80.4              | 2.14                     |                         | Mammoth Tank <sup>*1</sup> .....   | 118                           | 90       | 101.8 | 0.00                     |                         |
| Tuscaloosa <sup>t</sup> .....      | 97                            | 60       | 80.4  | 4.77                     |                         | Newport <sup>a†</sup> .....          | 98                            | 60              | 80.4              | 3.54                     |                         | Manzana.....                       | 112                           | 58       | 84.6  | 0.00                     |                         |
| Tuscumbia.....                     | 97                            | 65       | 80.0  | 7.90                     |                         | Newport <sup>b</sup> .....           | 98                            | 61              | 79.8              | 4.97                     |                         | Mare Island L. H. ....             | .....                         | .....    | ..... | 0.00                     |                         |
| Union <sup>t</sup> .....           | 96                            | 69       | 80.6  | 8.29                     |                         | Northport <sup>c†</sup> .....        | 97                            | 60              | 79.2              | 6.74                     |                         | Merced <sup>*1</sup> .....         | 113                           | 62       | 80.9  | 0.00                     |                         |
| Union Springs <sup>t</sup> .....   | 93                            | 61       | 79.0  | 9.27                     |                         | Oregon <sup>*1</sup> .....           | 94                            | 54              | 78.3              | .....                    |                         | Mills College.....                 | .....                         | .....    | ..... | 0.03                     |                         |
| Unlontown <sup>t</sup> .....       | 96                            | 72       | 81.3  | 6.28                     |                         | Osceola.....                         | 96                            | 61              | 78.9              | 5.18                     |                         | Milo.....                          | .....                         | .....    | ..... | 0.00                     |                         |
| Valleyhead.....                    | 94                            | 60       | 77.2  | 6.94                     |                         | Ozark <sup>t</sup> .....             | 97                            | 65              | 80.8              | 7.76                     |                         | Milton (near) <sup>*1</sup> .....  | 110                           | 55       | 76.2  | 0.00                     |                         |
| Warrior.....                       | .....                         | .....    | ..... | 6.92                     |                         | Picayune <sup>t</sup> .....          | 100                           | 59              | 80.3              | 3.20                     |                         | Modesto <sup>*1</sup> .....        | 108                           | 61       | 79.9  | 0.00                     |                         |
| Wetumpka.....                      | 94                            | 71       | 80.0  | 8.52                     |                         | Pinebluff <sup>t</sup> .....         | 100                           | 66              | 82.7              | 3.41                     |                         | Mohave <sup>*1</sup> .....         | 110                           | 65       | 88.0  | 0.00                     |                         |
| Wilsonville <sup>t</sup> .....     | .....                         | .....    | ..... | 5.04                     |                         | Pocahontas.....                      | 92                            | 60              | 76.9              | 5.02                     |                         | Mokelumne Hill <sup>*3</sup> ..... | 53                            | 74.2     | 0.00  |                          |                         |
| <i>Arizona.</i>                    |                               |          |       |                          |                         | Pond.....                            | 91                            | 58              | 75.4              | 2.89                     |                         | Monterey <sup>*1</sup> .....       | 82                            | 50       | 62.7  | 0.00                     |                         |
| Benson <sup>a†</sup> .....         | 99                            | 67       | 81.4  | 3.91                     |                         | Prescott.....                        | 100                           | 64              | 82.0              | 3.14                     |                         | Mount Frazier.....                 | .....                         | .....    | ..... | 0.00                     |                         |
| Bisbee <sup>t</sup> .....          | 91                            | 61       | 73.8  | 3.84                     |                         | Rison.....                           | 99                            | 62              | 80.3              | 3.51                     |                         | Napa <sup>b</sup> .....            | 104                           | 46       | 67.9  | 0.00                     |                         |
| Buckeye <sup>t</sup> .....         | 108                           | 72       | 88.8  | 1.70                     |                         | Russellville.....                    | 98                            | 65              | 80.2              | 4.20                     |                         | Needles.....                       | 112                           | 76       | 93.9  | 0.69                     |                         |
| Calabasas.....                     | 102                           | 61       | 79.0  | 8.51                     |                         | Silver Springs <sup>t</sup> .....    | 94                            | 58              | 76.0              | 4.97                     |                         | Nevada City.....                   | 96                            | 43       | 69.5  | T.                       |                         |
| Camp Creek.....                    | 101                           | 66       | 83.4  | 2.95                     |                         | Spielerville.....                    | 98                            | 62              | 79.8              | 4.30                     |                         | Newhall <sup>*1</sup> .....        | 112                           | 55       | 79.6  | 0.00                     |                         |
| Casa Grande <sup>*1</sup> .....    | 109                           | 70       | 91.1  | 1.25                     |                         | Stamps.....                          | 102                           | 66              | 79.9              | 2.66                     |                         | North Ontario.....                 | 100                           | 54       | 76.7  | 0.00                     |                         |
| Champie Camp.....                  | 111                           | 68       | 88.6  | 3.20                     |                         | Stuttgart <sup>t</sup> .....         | 97                            | 62              | 79.9              | 3.41                     |                         | North San Juan <sup>*1</sup> ..... | 102                           | 52       | 71.0  | T.                       |                         |
| Congress.....                      | 104                           | 63       | 84.2  | 2.92                     |                         | Texarkanat <sup>t</sup> .....        | 100                           | 62              | 82.0              | 5.49                     |                         | Oakland <sup>a</sup> .....         | 82                            | 49       | 61.6  | T.                       |                         |
| Dragoon.....                       | .....                         | .....    | ..... | 2.55                     |                         | Washington <sup>t</sup> .....        | 100                           | 63              | 81.2              | 3.82                     |                         | Ogilby <sup>*1</sup> .....         | 115                           | 85       | 100.2 | 0.00                     |                         |
| Dragoon Summit <sup>*1</sup> ..... | 98                            | 57       | 70.8  | 2.38                     |                         | Warren <sup>t</sup> .....            | 100                           | 63              | 81.2              | 3.82                     |                         | Oleta <sup>*1</sup> .....          | 105                           | 53       | 71.8  | 0.00                     |                         |
| Dudleyville.....                   | 104                           | 62       | 82.8  | 2.23                     |                         | Washington <sup>t</sup> .....        | 97                            | 69              | 80.8              | 3.43                     |                         | Orland <sup>*1</sup> .....         | 118                           | 62       | 84.6  | 0.00                     |                         |
| Empire Ranch.....                  | 60                            | .....    | ..... | 8.36                     |                         | Wiggs <sup>t</sup> .....             | 98                            | 65              | 80.4              | 5.40                     |                         | Palermo.....                       | 115                           | 50       | 79.7  | 0.00                     |                         |
| Flagstaff <sup>t</sup> .....       | 94                            | 48       | 69.5  | 2.69                     |                         | Witts Springs <sup>t</sup> .....     | 92                            | 59              | 75.0              | 4.94                     |                         | Paso Robles <sup>b</sup> .....     | 112                           | 34       | 66.6  | 0.00                     |                         |
| Fort Apache.....                   | 98                            | 55       | 76.1  | 3.59                     |                         | <i>California.</i>                   | 90                            | 42              | 64.4              | 0.00                     |                         | Peachland <sup>*1</sup> .....      | 94                            | 47       | 66.0  | T.                       |                         |
| Fort Defiance.....                 | 90                            | 41       | 69.8  | 2.53                     |                         | Arlington Heights.....               | 111                           | 51              | 79.6              | 0.00                     |                         | Piedras Blancas L. H. ....         | .....                         | .....    | ..... | 0.00                     |                         |
| Fort Grant <sup>t</sup> .....      | 94                            | 61       | 76.0  | 4.41                     |                         | Azusa.....                           | .....                         | .....           | .....             | .....                    |                         | Pigeon Point L. H. ....            | .....                         | .....    | ..... | 0.00                     |                         |
| Fort Huachucat <sup>t</sup> .....  | 94                            | 53       | 73.7  | 6.22                     |                         | Ballast Point L. H. ....             | .....                         | .....           | .....             | .....                    |                         | Pilot Creek.....                   | .....                         |          |       |                          |                         |

TABLE II.—*Meteorological record of voluntary and other cooperating observers—Continued.*

| Stations.                 | Temperature.<br>(Fahrenheit.) |          |       | Precipita-<br>tion.      |                         |                           | Stations.       | Temperature.<br>(Fahrenheit.) |                          |                         | Precipita-<br>tion. |          |       | Stations.                | Temperature.<br>(Fahrenheit.) |                 |          | Precipita-<br>tion. |                          |                         |      |
|---------------------------|-------------------------------|----------|-------|--------------------------|-------------------------|---------------------------|-----------------|-------------------------------|--------------------------|-------------------------|---------------------|----------|-------|--------------------------|-------------------------------|-----------------|----------|---------------------|--------------------------|-------------------------|------|
|                           | Maximum.                      | Minimum. | Mean. | Rain and melted<br>snow. | Total depth of<br>snow. | Maximum.                  | Minimum.        | Mean.                         | Rain and melted<br>snow. | Total depth of<br>snow. | Maximum.            | Minimum. | Mean. | Rain and melted<br>snow. | Total depth of<br>snow.       | Maximum.        | Minimum. | Mean.               | Rain and melted<br>snow. | Total depth of<br>snow. |      |
| <i>California—Cont'd.</i> |                               |          |       |                          |                         |                           |                 |                               |                          |                         |                     |          |       |                          |                               |                 |          |                     |                          |                         |      |
| Salton *†.                | °                             | °        | °     | Ins.                     | Ins.                    | Colorado—Cont'd.          | °               | °                             | °                        | Ins.                    | Wausau              | °        | °     | °                        | Ins.                          | Florida—Cont'd. | °        | °                   | °                        | Ins.                    | Ins. |
| San Bernardino†.          | 121                           | 80       | 98.4  | T.                       |                         | Rangely†.                 | 98              | 45                            | 72.4                     | 1.38                    | Aldairsville        | 93       | 69    | 79.5                     | 20.68                         |                 |          |                     |                          |                         |      |
| San Jacinto.              | 108                           | 47       | 78.6  | 0.00                     |                         | Redcliff.                 | 100             | 52                            | 74.4                     | 0.92                    | Alapaha             | 91       | 66    | 78.0                     | 5.23                          |                 |          |                     |                          |                         |      |
| San Leandro*†.            | 109                           | 49       | 80.4  | 0.54                     |                         | Rockyford.                | .....           | .....                         | .....                    | .....                   | Albany†.            | 93       | 67    | 79.8                     | 8.73                          |                 |          |                     |                          |                         |      |
| San Luis L. H.            | 86                            | 58       | 64.6  | 0.00                     |                         | Ruby.                     | .....           | .....                         | .....                    | .....                   | Allentown†.         | 97       | 67    | 80.4                     | 7.35                          |                 |          |                     |                          |                         |      |
| San Luis L. H.            | 83                            | 57       | 71.8  | 0.00                     |                         | Saguache†.                | 83              | 42                            | 62.2                     | 1.05                    | Americus†.          | 98       | 68    | 80.4                     | 10.25                         |                 |          |                     |                          |                         |      |
| San Miguel*†.             | 107                           | 55       | 72.4  | 0.00                     |                         | Salida.                   | 94              | 40                            | 66.9                     | 0.86                    | Athens b†.          | 91       | 68    | 77.4                     | 5.73                          |                 |          |                     |                          |                         |      |
| Santa Barbara a.          | 90                            | 56       | 68.6  | 0.00                     |                         | Santa Clara*†.            | 85              | 42                            | 60.2                     | 2.37                    | Bainbridge.         | 97       | 67    | 79.4                     | 8.91                          |                 |          |                     |                          |                         |      |
| Santa Barbara L. H.       | .....                         | .....    | ..... | .....                    |                         | Seguro.                   | 78              | 30                            | 56.2                     | 3.14                    | Bellville.          | 95       | 67    | 79.3                     | 10.48                         |                 |          |                     |                          |                         |      |
| Santa Clara a.            | 94                            | 42       | 63.5  | 0.00                     |                         | Seibert†.                 | .....           | .....                         | .....                    | .....                   | Blakely†.           | 93       | 71    | 79.2                     | 9.36                          |                 |          |                     |                          |                         |      |
| Santa Cruz b†.            | 94                            | 49       | 66.4  | 0.00                     |                         | Smoky Hill Mine.          | 88              | 39                            | 68.4                     | 2.78                    | Brag.               | 96       | 67    | 79.8                     | 23.02                         |                 |          |                     |                          |                         |      |
| Santa Maria.              | 95                            | 49       | 66.4  | 0.00                     |                         | Springfield.              | .....           | .....                         | .....                    | .....                   | Camak.              | 94       | 68    | 78.4                     | 4.41                          |                 |          |                     |                          |                         |      |
| Santa Monica*†.           | 84                            | 60       | 72.0  | 0.00                     |                         | Stamford*†.               | 78              | 38                            | 50.8                     | 3.03                    | Canton†.            | .....    | ..... | .....                    | 7.34                          |                 |          |                     |                          |                         |      |
| Santa Rosa*†.             | 97                            | 47       | 62.3  | 0.00                     |                         | Strickler Tunnel.         | .....           | .....                         | .....                    | .....                   | Cartersville.       | 94       | 66    | 78.6                     | 7.30                          |                 |          |                     |                          |                         |      |
| Saticoy.                  | 114                           | 53       | 82.6  | 0.00                     |                         | Trinidad.                 | .....           | .....                         | .....                    | .....                   | Clayton†.           | 90       | 62    | 75.4                     | 11.40                         |                 |          |                     |                          |                         |      |
| Shasta.                   | 99                            | 51       | 75.7  | 0.00                     |                         | T. S. Ranch†.             | 93              | 55                            | 72.8                     | 1.29                    | Columbus.           | 93       | 70    | 79.1                     | 11.98                         |                 |          |                     |                          |                         |      |
| Sierra Madre.             | 92                            | 24       | 58.0  | 0.00                     |                         | Wagon Wheel.              | 75              | 29                            | 52.8                     | 1.35                    | Covington.          | 96       | 63    | 75.9                     | 10.69                         |                 |          |                     |                          |                         |      |
| Sneddens Ranch*†.         | 92                            | 24       | 58.0  | 0.00                     |                         | Walton.                   | 88              | 33                            | 62.4                     | 0.53                    | Crescent.           | 97       | 67    | 79.1                     | 9.64                          |                 |          |                     |                          |                         |      |
| Sonoma.                   | .....                         | .....    | ..... | .....                    |                         | Wray†.                    | 98              | 50                            | 74.1                     | 2.56                    | Dahlonega†.         | 91       | 61    | 73.7                     | 10.69                         |                 |          |                     |                          |                         |      |
| S. E. Farallone L. H.     | .....                         | .....    | ..... | .....                    |                         | Yuma.                     | .....           | .....                         | .....                    | .....                   | Diamond.            | 88       | 59    | 72.8                     | 11.74                         |                 |          |                     |                          |                         |      |
| Stanford University.      | 91                            | 48       | 65.2  | 0.00                     |                         | Connecticut.              | .....           | .....                         | .....                    | .....                   | Eastman.            | 98       | 69    | 81.1                     | 7.61                          |                 |          |                     |                          |                         |      |
| Stockton a.               | 105                           | 40       | 71.4  | 0.00                     |                         | Canton†.                  | 89              | 44                            | 69.3                     | 7.02                    | Elberton†.          | 92       | 68    | 78.1                     | 12.15                         |                 |          |                     |                          |                         |      |
| Summerdale†.              | 92                            | 46       | 70.0  | 0.00                     |                         | Colchester.               | 88              | 47                            | 71.2                     | 8.65                    | Fitzgerald.         | 94       | 69    | 79.6                     | 9.58                          |                 |          |                     |                          |                         |      |
| Susanville†.              | 96                            | 43       | 70.0  | 0.08                     |                         | Falls Village.            | .....           | .....                         | .....                    | .....                   | Fleming†.           | 95       | 68    | 80.2                     | 28.60                         |                 |          |                     |                          |                         |      |
| Sutter Creek*†.           | 102                           | 43       | 70.4  | 0.00                     |                         | Greenfield Hill.          | .....           | .....                         | .....                    | .....                   | Fort Gaines.        | 94       | 63    | 79.2                     | 12.67                         |                 |          |                     |                          |                         |      |
| Tehama*†.                 | 110                           | 64       | 82.8  | T.                       |                         | Hartford a.               | 88              | 52                            | 72.2                     | 7.48                    | Franklin.           | 91       | 68    | 77.4                     | 13.29                         |                 |          |                     |                          |                         |      |
| Templeton*†.              | 116                           | 56       | 72.0  | 0.00                     |                         | Hartford b.               | .....           | .....                         | .....                    | .....                   | Gainesville.        | 88       | 61    | 75.5                     | 9.58                          |                 |          |                     |                          |                         |      |
| Trinidad L. H.            | 96                            | 50       | 73.2  | 0.00                     |                         | Hawleyville.              | 91              | 46                            | 71.1                     | 8.47                    | Gillsville†.        | 93       | 66    | 77.4                     | 7.78                          |                 |          |                     |                          |                         |      |
| Truckee*†.                | 96                            | 50       | 73.2  | 0.00                     |                         | Lake Konomoc.             | .....           | .....                         | .....                    | .....                   | Greenbush.          | 92       | 62    | 76.8                     | 2.45                          |                 |          |                     |                          |                         |      |
| Tulare b.                 | 112                           | 50       | 82.2  | 0.00                     |                         | Middletown.               | 93              | 50                            | 74.2                     | 7.92                    | Griffin.            | 95       | 67    | 78.7                     | 8.80                          |                 |          |                     |                          |                         |      |
| Turlock.                  | 109                           | 62       | 86.5  | 0.00                     |                         | New London†.              | 87              | 52                            | 71.2                     | 7.69                    | Harrison.           | 92       | 71    | 80.2                     | 16.41                         |                 |          |                     |                          |                         |      |
| Ukiah.                    | 103                           | 45       | 70.4  | T.                       |                         | North Grosvenor.          | .....           | .....                         | .....                    | .....                   | Hephzibah*†.        | 90       | 72    | 80.2                     | 11.80                         |                 |          |                     |                          |                         |      |
| Upperlake.                | 109                           | 44       | 75.8  | T.                       |                         | Northwark.                | 88              | 50                            | 71.0                     | 7.15                    | Jesup.              | 96       | 68    | 80.0                     | 18.13                         |                 |          |                     |                          |                         |      |
| Upper Mattole*†.          | 90                            | 53       | 64.5  | 0.00                     |                         | Pomfret.                  | 88 <sup>a</sup> | 49 <sup>a</sup>               | 71 <sup>a</sup>          | 5.60                    | Lagrange†.          | 95       | 67    | 76.5                     | 12.71                         |                 |          |                     |                          |                         |      |
| Vacaville a*†.            | 113                           | 58       | 75.5  | 0.00                     |                         | South Manchester.         | .....           | .....                         | .....                    | .....                   | Lawrenceville.      | 97       | 68    | 79.4                     | 5.42                          |                 |          |                     |                          |                         |      |
| Ventura†.                 | 89                            | 44       | 63.8  | 0.00                     |                         | Storrs.                   | 88              | 47                            | 70.0                     | 5.87                    | Louisville.         | 91       | 69    | 77.7                     | 8.42                          |                 |          |                     |                          |                         |      |
| Visalia.                  | 107                           | 64       | 82.6  | 0.00                     |                         | Voluntown†.               | 87              | 43                            | 71.0                     | 7.28                    | Lumpkin.            | 91       | 69    | 77.7                     | 13.44                         |                 |          |                     |                          |                         |      |
| Volcano Springs*†.        | 124                           | 80       | 100.2 | 0.00                     |                         | Wallingford.              | .....           | .....                         | .....                    | .....                   | Macon.              | 96       | 66    | 76.6                     | 8.76                          |                 |          |                     |                          |                         |      |
| Walnut Creek.             | 109                           | 55       | 73.8  | 0.00                     |                         | Waterbury.                | 92              | 46                            | 71.6                     | 9.48                    | Marietta.           | 89       | 64    | 75.8                     | 6.21                          |                 |          |                     |                          |                         |      |
| West Palmdale.            | .....                         | .....    | ..... | .....                    |                         | West Cornwall†.           | 85              | 49                            | 68.6                     | 6.77                    | Marshallville†.     | 90       | 71    | 79.0                     | 9.27                          |                 |          |                     |                          |                         |      |
| Wheatland.                | 114                           | 54       | 76.8  | 0.00                     |                         | West Simsbury.            | .....           | .....                         | .....                    | .....                   | Mauny.              | 94       | 68    | 79.2                     | 13.16                         |                 |          |                     |                          |                         |      |
| Williams*†.               | 113                           | 60       | 82.0  | 0.00                     |                         | Winsted*†.                | 90              | 52                            | 68.9                     | .....                   | Millen.             | 99       | 70    | 81.2                     | 8.89                          |                 |          |                     |                          |                         |      |
| Wilmington*.              | 97                            | 60       | 72.3  | 0.00                     |                         | Delaware.                 | .....           | .....                         | .....                    | .....                   | Morgan†.            | 93       | 67    | 78.6                     | 14.75                         |                 |          |                     |                          |                         |      |
| Wire Bridge*.             | 108                           | 58       | 78.8  | 0.00                     |                         | Dover.                    | 93              | 59                            | 76.0                     | 4.11                    | Mount Vernon.       | 93       | 67    | 81.1                     | 13.50                         |                 |          |                     |                          |                         |      |
| Yerba Buena L. H.         | .....                         | .....    | ..... | .....                    |                         | Milford.                  | 95              | 62                            | 79.3                     | 4.77                    | Newnan.             | 94       | 58    | 76.0                     | 14.59                         |                 |          |                     |                          |                         |      |
| Yreka†.                   | 104                           | 40       | 72.0  | 0.05                     |                         | Millsboro.                | 94              | 59                            | 77.3                     | 5.25                    | Point Peter.        | 96       | 67    | 78.4                     | 8.74                          |                 |          |                     |                          |                         |      |
| <i>Colorado.</i>          |                               |          |       |                          |                         | Newark.                   | 91              | 53                            | 74.8                     | 7.02                    | Poole†.             | 94       | 68    | 79.4                     | 13.82                         |                 |          |                     |                          |                         |      |
| Altman.                   | 83                            | 35       | 58.4  | 2.20                     |                         | Seaford.                  | 92              | 55                            | 76.2                     | 4.19                    | Quitman†.           | 93       | 67    | 79.6                     | 9.04                          |                 |          |                     |                          |                         |      |
| Antlers†.                 | 96                            | 50       | 73.2  | 1.12                     |                         | Columbia.                 | .....           | .....                         | .....                    | .....                   | Ramsey.             | 93       | 62    | 77.0                     | 5.15                          |                 |          |                     |                          |                         |      |
| Arkins.                   | .....                         | .....    | ..... | .....                    |                         | Distributing Reservoir*†. | 90              | 60                            | 77.2                     | 8.97                    | Rome†.              | 95       | 66    | 78.5                     | 5.10                          |                 |          |                     |                          |                         |      |
| Boulder.                  | 93                            | 52       | 73.0  | 1.52                     |                         | Receiving Reservoir*†.    | 90              | 61                            | 77.3                     | 10.61                   | Talbotton†.         | 89       | 68    | 74.5                     | 11.06                         |                 |          |                     |                          |                         |      |
| Boxelder.                 | .....                         | .....    | ..... | 1.71                     |                         | West Washington.          | 94              | 56                            | 77.0                     | 9.13                    | Tallapoosa.         | 89       | 66    | 76.7                     | 10.82                         |                 |          |                     |                          |                         |      |
| Breckenridge†.            | 93                            | 29       | 52.9  | 1.59                     |                         | Florida.                  | .....           | .....                         | .....                    | .....                   | Thomasville†.       | 94       | 70    | 79.7                     | 9.78                          |                 |          |                     |                          |                         |      |
| Canyon†.                  | 99                            | 52       | 75.5  | 0.90                     |                         | Archer†.                  | 94              | 69                            | 81.2                     | 9.49                    | Toccoa†.            | 91       | 60    | 77.4                     | 9.13                          |                 |          |                     |                          |                         |      |
| Cartrock.                 | 90                            | 43       | 67.8  | 1.49                     |                         | Bartow.                   | 91              | 70                            | 80.3                     | 8.89                    | Union Point.        | 96       | 67    | 77.8                     | 7.24                          |                 |          |                     |                          |                         |      |
| Cedaredge.                | 93                            | 44       | 70.6  | 0.62                     |                         | Brooksville†.             | 92              | 69                            | 79.4                     | 13.44                   | Washington†.        | 91       | 68    | 78.4                     | 7.07                          |                 |          |                     |                          |                         |      |
| Cheyenne Wells.           | 98                            | 32       | 73.8  | 1.33                     |                         | Carrabelle†.              | 91              | 73                            | 81.0                     | 19.90                   | Waycross.           | 93       | 70    | 81.0                     | 9.55                          |                 |          |                     |                          |                         |      |
| Collbar.                  | .....                         | .....    | ..... | 1.96                     |                         | Clermont.                 | 97              | 68                            | 82.2                     | 13.43                   | Waynesboro.         | 92       | 63    | 77.2                     | 13.60                         |                 |          |                     |                          |                         |      |
| Colorado Springs†.        | 89                            | 46       | 68.0  | 0.56                     |                         | Crawfordville.            | .....           | .....                         | .....                    | .....                   | West Point.         | 95       | 69    | 78.8                     | 9.83                          |                 |          |                     |                          |                         |      |
| Cope.                     | 98                            | 50       | 74.0  | 1.75                     |                         | De Funiak Springs.        | 95              | 66                            | 78.2                     | 22.98                   | <i>Idaho.</i>       | .....    | ..... | .....                    | .....                         |                 |          |                     |                          |                         |      |
| Crook.                    | 105                           | 45       | 75.5  | 0.14                     |                         | Earnestville.             | 95              | 70                            | 81.6                     | 20.16                   | Albany Falls J.     | 99       | 46    | 65.1                     | 0.07                          |                 |          |                     |                          |                         |      |
| Delta.                    | 107                           | 47       | 74.0  | 0.51                     |                         | Esterio*†.                | 90              | 69                            | 79.6                     | .....                   | American Falls.     | 102      | 44    | 72.2                     | 0.40                          |                 |          |                     |                          |                         |      |
| Dumont†.                  | .....                         | .....    | ..... | 2.60                     |                         | Eustis†.                  | 96              | 67                            | 81.8                     | 10.95                   | Blackfoot†.         | 97       | 34    | 69.6                     | 0.15                          |                 |          |                     |                          |                         |      |
| Durango.                  | 91                            | 43       | 69.0  | 0.89                     |                         | Federal Point†.           | 92              | 68                            | 80.6                     | 10.59                   | Boise Barracks.     | 105      | 46    | 75.2                     | 0.25                          |                 |          |                     |                          |                         |      |
| Fort Collins†.            | 96                            | 43       | 69.9  | 0.98                     |                         | Fort Meade.               | 92              | 67                            | 80.9                     | 9.68                    | Burnside†.          | 91       | 43    | 68.4                     | 1.44                          |                 |          |                     |                          |                         |      |
| Fort Morgan.              | 101                           | 42       | 73.2  | 0.33                     |                         | Gainesville.              | 95              | 70                            | 81.8                     | 8.21                    | Coeur d' Alene.     | 100      | 32    | 73.8                     | .....                         |                 |          |                     |                          |                         |      |
| Fox.                      | .....                         | .....    | ..... | 1.10                     |                         | Grasmere†.                | 94              | 68                            | 82.0                     | 12.20                   | Corral*†.           | 96       | 46    | 68.6                     | 0.76                          |                 |          |                     |                          |                         |      |
| Garnett.                  | 85                            | 31       | 59.9  | 0.32                     |                         | Haywood.                  | .....           | .....                         | .....                    | .....                   | Downey.             | 100      | 38    | 70.2                     |                               |                 |          |                     |                          |                         |      |

TABLE II.—*Meteorological record of voluntary and other cooperating observers—Continued.*

| Stations.                        | Temperature.<br>(Fahrenheit.) |          |                   | Precipita-<br>tion.      |                         | Stations.                          | Temperature.<br>(Fahrenheit.) |          |       | Precipita-<br>tion.      |                         | Stations.   | Temperature.<br>(Fahrenheit.) |          |       | Precipita-<br>tion.      |                         |
|----------------------------------|-------------------------------|----------|-------------------|--------------------------|-------------------------|------------------------------------|-------------------------------|----------|-------|--------------------------|-------------------------|-------------|-------------------------------|----------|-------|--------------------------|-------------------------|
|                                  | Maximum.                      | Minimum. | Mean.             | Rain and melted<br>snow. | Total depth of<br>snow. |                                    | Maximum.                      | Minimum. | Mean. | Rain and melted<br>snow. | Total depth of<br>snow. |             | Maximum.                      | Minimum. | Mean. | Rain and melted<br>snow. | Total depth of<br>snow. |
| <i>Illinoia—Cont'd.</i>          |                               |          |                   |                          |                         | <i>Indiana—Cont'd.</i>             |                               |          |       |                          |                         | <i>Ind.</i> |                               |          |       |                          |                         |
| Aurora a.....                    | 94                            | 50       | 71.7              | 4.22                     | In.                     | Crawfordsville.....                | 98                            | 55       | 76.0  | 3.26                     |                         |             |                               |          |       |                          |                         |
| Aurora b.....                    | 93                            | 49       | 72.1              | 4.63                     |                         | Delphi.....                        | 95                            | 51       | 72.8  | 4.13                     |                         |             |                               |          |       |                          |                         |
| Bloomington.....                 | 97                            | 56       | 75.6              | 1.85                     |                         | Edwardsville* <sup>1</sup> .....   | 92                            | 62       | 77.9  | 2.59                     |                         |             |                               |          |       |                          |                         |
| Cambridge.....                   | 90                            | 55       | 71.5              | 6.57                     |                         | Farmland.....                      | 91                            | 54       | 72.1  | 2.60                     |                         |             |                               |          |       |                          |                         |
| Carlinvillet.....                | 97                            | 58       | 76.4              | 2.68                     |                         | Greensburg.....                    | 95                            | 58       | 75.0  | 0.94                     |                         |             |                               |          |       |                          |                         |
| Carlyle.....                     |                               |          |                   | 4.66                     |                         | Hammond.....                       | 95                            | 50       | 71.4  | 2.21                     |                         |             |                               |          |       |                          |                         |
| Charleston.....                  | 93                            | 56       | 75.7              | 3.14                     |                         | Hector.....                        | 92                            | 51       | 73.4  | 3.53                     |                         |             |                               |          |       |                          |                         |
| Chemung.....                     | 92                            | 46       | 68.9              | 5.66                     |                         | Huntington.....                    | 94                            | 52       | 73.4  | 1.97                     |                         |             |                               |          |       |                          |                         |
| Chester.....                     |                               |          |                   | 4.28                     |                         | Jasper.....                        | 97                            | 54       | 76.8  | 6.85                     |                         |             |                               |          |       |                          |                         |
| Cisne*.....                      | 94                            | 56       | 75.5              | 4.91                     |                         | Jeffersonville.....                | 94                            | 60       | 77.3  | 4.62                     |                         |             |                               |          |       |                          |                         |
| Coatsburg.....                   | 95                            | 55       | 74.0              | 2.11                     |                         | Knightstown.....                   | 95                            | 54       | 74.0  | 3.73                     |                         |             |                               |          |       |                          |                         |
| Cobden*.....                     | 94                            | 58       | 76.2              | 4.81                     |                         | Knox.....                          |                               |          |       | 5.00                     |                         |             |                               |          |       |                          |                         |
| Cordova.....                     |                               |          |                   | 7.07                     |                         | Kokomo*.....                       | 90                            | 55       | 72.8  | 2.42                     |                         |             |                               |          |       |                          |                         |
| Danville.....                    | 95                            | 56       | 75.0              | 8.89                     |                         | Lafayette*.....                    | 92                            | 51       | 72.6  | 4.86                     |                         |             |                               |          |       |                          |                         |
| Decatur*.....                    | 98                            | 50       | 75.0              | 2.16                     |                         | Laporte.....                       | 95                            | 50       | 72.8  | 3.10                     |                         |             |                               |          |       |                          |                         |
| Dixon*.....                      | 94                            | 52       | 71.6              | 6.39                     |                         | Logansport b*.....                 | 98                            | 53       | 73.2  | 2.37                     |                         |             |                               |          |       |                          |                         |
| Dwight*.....                     | 95                            | 49       | 72.6              | 3.35                     |                         | Madison.....                       | 94                            | 61       | 76.8  | 3.79                     |                         |             |                               |          |       |                          |                         |
| Effingham*.....                  | 94                            | 55       | 75.6              | 8.87                     |                         | Marengo*.....                      | 96                            | 52       | 75.7  | 3.60                     |                         |             |                               |          |       |                          |                         |
| Elgin.....                       | 91                            | 51       | 70.2              | 6.43                     |                         | Marion*.....                       | 95                            | 50       | 73.1  | 2.12                     |                         |             |                               |          |       |                          |                         |
| Equality.....                    | 98                            | 60       | 80.2              | 1.14                     |                         | Marike.....                        | 92                            | 48       | 73.1  | 1.50                     |                         |             |                               |          |       |                          |                         |
| Fort Sheridan.....               | 95                            | 54       | 70.2              | 2.86                     |                         | Manzy*.....                        | 94                            | 53       | 73.4  | 2.63                     |                         |             |                               |          |       |                          |                         |
| Friendgrove*.....                |                               |          |                   | 3.38                     |                         | Michigan City* <sup>10</sup> ..... | 94                            | 55       | 71.0  |                          |                         |             |                               |          |       |                          |                         |
| Galva*.....                      | 93                            | 51       | 71.6              | 7.13                     |                         | Mount Vernon*.....                 | 96                            | 61       | 79.5  | 2.90                     |                         |             |                               |          |       |                          |                         |
| Glenwood* <sup>1</sup> .....     | 98 <sup>d</sup>               | 60       | 71.8 <sup>d</sup> | 4.85                     |                         | Northfield*.....                   | 91                            | 53       | 72.1  | 4.53                     |                         |             |                               |          |       |                          |                         |
| Grafton*.....                    |                               |          |                   | 2.03                     |                         | Paoli.....                         | 94                            | 58       | 75.4  | 3.56                     |                         |             |                               |          |       |                          |                         |
| Grayville.....                   | 97                            | 60       | 78.2              | 2.07                     |                         | Princeton* <sup>11</sup> .....     | 98                            | 56       | 74.7  | 4.30                     |                         |             |                               |          |       |                          |                         |
| Greenville*.....                 | 95                            | 58       | 75.8              | 2.61                     |                         | Richmond.....                      | 92                            | 50       | 73.0  | 3.32                     |                         |             |                               |          |       |                          |                         |
| Griggsville*.....                | 96                            | 57       | 75.7              | 4.49                     |                         | Rockport.....                      | 92                            | 60       | 76.8  | 1.65                     |                         |             |                               |          |       |                          |                         |
| Halliday* <sup>2</sup> .....     | 94                            | 64       | 79.3              | 5.29                     |                         | Rockville*.....                    | 93                            | 58       | 73.2  | 3.61                     |                         |             |                               |          |       |                          |                         |
| Havana*.....                     | 94                            | 59       | 75.0              | 2.78                     |                         | Scottsburg.....                    | 98                            | 52       | 74.4  | 2.94                     |                         |             |                               |          |       |                          |                         |
| Henry.....                       | 94                            | 50       | 73.0              | 7.10                     |                         | Shelbyville.....                   | 98                            | 52       | 74.4  | 2.94                     |                         |             |                               |          |       |                          |                         |
| Hillsborot.....                  | 96                            | 57       | 75.6              | 2.69                     |                         | South Bend*.....                   | 95                            | 51       | 72.1  | 4.11                     |                         |             |                               |          |       |                          |                         |
| Joliet*.....                     | 94                            | 50       | 71.8              | 4.69                     |                         | Syracuse*.....                     |                               |          |       | 3.02                     |                         |             |                               |          |       |                          |                         |
| Kankakee a.....                  | 98                            | 52       | 74.2              | 4.20                     |                         | Terre Haute*.....                  | 96                            | 58       | 75.7  | 2.66                     |                         |             |                               |          |       |                          |                         |
| Kishwaukee.....                  | 92                            | 45       | 68.8              | 8.23                     |                         | Topeka*.....                       |                               |          |       | 4.93                     |                         |             |                               |          |       |                          |                         |
| Knoxville a.....                 | 94                            | 52       | 71.4              | 10.18                    |                         | Valparaiso*.....                   | 94                            | 54       | 72.1  | 4.00                     |                         |             |                               |          |       |                          |                         |
| Lagrange*.....                   | 93                            | 50       | 70.3              | 4.59                     |                         | Vevay.....                         | 95                            | 61       | 78.6  | 2.40                     |                         |             |                               |          |       |                          |                         |
| Lahepre.....                     | 94                            | 53       | 73.6              | 10.40                    |                         | Vincennes.....                     | 99                            | 50       | 76.8  | 3.84                     |                         |             |                               |          |       |                          |                         |
| Lanar*.....                      | 92                            | 45       | 69.8              | 7.28                     |                         | Warsaw.....                        | 92                            | 51       | 71.2  | 3.26                     |                         |             |                               |          |       |                          |                         |
| Lexington.....                   | 96                            | 48       | 73.0              | 2.44                     |                         | Washington*.....                   | 99                            | 55       | 76.9  | 2.81                     |                         |             |                               |          |       |                          |                         |
| Loami*.....                      |                               |          |                   | 2.50                     |                         | Winamac*.....                      | 97                            | 46       | 71.7  | 4.84                     |                         |             |                               |          |       |                          |                         |
| McLeansboro*.....                | 96                            | 57       | 76.2              | 5.15                     |                         | Worthington*.....                  | 97                            | 52       | 75.4  | 3.70                     |                         |             |                               |          |       |                          |                         |
| Martinsville.....                | 100                           | 50       | 74.8              | 3.44                     |                         | <i>Indian Territory.</i>           |                               |          |       |                          |                         |             |                               |          |       |                          |                         |
| Martinton*.....                  | 95                            | 46       | 72.8              | 4.03                     |                         | Healdton*.....                     | 105                           | 61       | 81.0  | 2.68                     |                         |             |                               |          |       |                          |                         |
| Mascoutah* <sup>3</sup> .....    | 96                            | 58       | 75.2              | 5.57                     |                         | Kemp*.....                         | 107                           | 65       | 83.0  | 3.20                     |                         |             |                               |          |       |                          |                         |
| Mattoon.....                     | 95                            | 54       | 74.0              |                          |                         | Lehigh*.....                       | 100                           | 60       | 79.7  | 3.39                     |                         |             |                               |          |       |                          |                         |
| Minonk*.....                     | 95                            | 48       | 72.2              | 4.76                     |                         | Purcell.....                       | 100 <sup>c</sup>              | 62*      | 78.8* | 3.76                     |                         |             |                               |          |       |                          |                         |
| Monmouth*.....                   | 93                            | 50       | 72.0              | 9.23                     |                         | South McAlester*.....              |                               |          |       | 3.36                     |                         |             |                               |          |       |                          |                         |
| Morrisonville*.....              | 91                            | 54       | 73.3              | 3.38                     |                         | Tulsa*.....                        |                               |          |       | 3.63                     |                         |             |                               |          |       |                          |                         |
| Mount Carmel*.....               |                               |          |                   | 3.28                     |                         | Wagoner.....                       | 102                           | 58       | 80.0  | 1.71                     |                         |             |                               |          |       |                          |                         |
| Mount Pulaski.....               | 98                            | 56       | 75.6              | 2.77                     |                         | <i>Iowa.</i>                       |                               |          |       |                          |                         |             |                               |          |       |                          |                         |
| Mount Vernon.....                | 98                            | 53       | 74.6              | 3.18                     |                         | Adair.....                         |                               |          |       |                          |                         |             |                               |          |       |                          |                         |
| New Burnside*.....               | 100                           | 56       | 77.9              | 3.28                     |                         | Alton.....                         | 99                            | 49       | 75.8  | 0.58                     |                         |             |                               |          |       |                          |                         |
| Oliney a.....                    | 96                            | 54       | 76.2              | 3.58                     |                         | Albia.....                         | 96                            | 49       | 72.9  |                          |                         |             |                               |          |       |                          |                         |
| Oswego* <sup>1</sup> .....       | 92                            | 56       | 70.5              | 3.75                     |                         | Algona* <sup>1</sup> .....         | 90                            | 55       | 71.2  | 5.79                     |                         |             |                               |          |       |                          |                         |
| Ottawa*.....                     | 95                            | 50       | 72.3              | 4.31                     |                         | Alta a*.....                       | 96                            | 48       | 72.1  | 5.49                     |                         |             |                               |          |       |                          |                         |
| Palestine*.....                  | 95                            | 53       | 74.5              | 4.29                     |                         | Amanat*.....                       | 94                            | 49       | 72.0  | 2.61                     |                         |             |                               |          |       |                          |                         |
| Pana.....                        | 95                            | 56       | 75.4              | 3.17                     |                         | Ames b*.....                       | 99                            | 48       | 72.3  | 3.30                     |                         |             |                               |          |       |                          |                         |
| Paris.....                       | 96                            | 54       | 75.4              | 3.31                     |                         | Ames (near).....                   |                               |          |       | 3.52                     |                         |             |                               |          |       |                          |                         |
| Peoria a*.....                   |                               |          |                   | 3.55                     |                         | Atlantic*.....                     | 98                            | 42       | 73.6  | 0.63                     |                         |             |                               |          |       |                          |                         |
| Peoria b*.....                   | 95                            | 54       | 73.5              | 3.26                     |                         | Autobon.....                       | 97                            | 46       | 71.6  | 1.55                     |                         |             |                               |          |       |                          |                         |
| Philot.....                      | 96                            | 47       | 73.4              | 2.29                     |                         | Belknap.....                       | 95                            | 54       | 74.0  | 3.75                     |                         |             |                               |          |       |                          |                         |
| Plumhill*.....                   | 94                            | 59       | 75.6              | 3.98                     |                         | Belleplaine*.....                  |                               |          |       | 7.85                     |                         |             |                               |          |       |                          |                         |
| Rantoul*.....                    | 95                            | 53       | 73.6              | 3.87                     |                         | Bonaparte*.....                    | 95                            | 52       | 73.4  | 10.55                    |                         |             |                               |          |       |                          |                         |
| Raun.....                        | 95                            | 60       | 78.1              | 1.56                     |                         | Britt.....                         | 95                            | 40       | 68.8  | 4.35                     |                         |             |                               |          |       |                          |                         |
| Reynolds.....                    | 92                            | 51       | 72.0              | 7.78                     |                         | Carroll.....                       | 99                            | 45       | 72.1  | 2.58                     |                         |             |                               |          |       |                          |                         |
| Riley*.....                      | 91                            | 53       | 70.2              | 4.35                     |                         | Cedarfalls.....                    | 96                            | 46       | 71.6  | 4.42                     |                         |             |                               |          |       |                          |                         |
| Robinson.....                    | 96                            | 57       | 76.0              | 8.97                     |                         | Cedar Rapids*.....                 | 98                            | 53       | 73.8  | 4.38                     |                         |             |                               |          |       |                          |                         |
| Rockford.....                    | 94                            | 52       | 71.0              | 5.46                     |                         | Centerville.....                   | 96                            | 52       | 76.2  | 5.12                     |                         |             |                               |          |       |                          |                         |
| Roundgrov*.....                  | 96                            | 50       | 72.6              | 5.61                     |                         | Chariton.....                      | 96                            | 50       | 73.6  | 1.41                     |                         |             |                               |          |       |                          |                         |
| St. Charles* <sup>12</sup> ..... | 91                            | 57       | 69.9              | 5.73                     |                         | Charles City.....                  | 96                            | 37       | 68.8  | 1.38                     |                         |             |                               |          |       |                          |                         |
| St. John*.....                   | 95                            | 57       | 77.7              | 2.86                     |                         | Clarinda*.....                     |                               |          |       | 1.16                     |                         |             |                               |          |       |                          |                         |
| Scales Mound.....                | 90                            | 45       | 69.4              | 7.72                     |                         | Clear Lake.....                    | 94                            | 46       | 69.9  | 2.98                     |                         |             |                               |          |       |                          |                         |
| Streator*.....                   | 96                            | 55       | 73.4              | 2.96                     |                         | Clinton.....                       | 93                            | 51       | 71.8  | 7.87                     |                         |             |                               |          |       |                          |                         |
| Sycamore*.....                   | 92                            | 49       | 69.2              | 6.47                     |                         | College Springs.....               | 99                            | 54       | 76.0  | 1.91                     |                         |             |                               |          |       |                          |                         |
| Tilden*.....                     | 96                            | 58       | 76.0              | 4.85                     |                         | Corning*.....                      | 99                            | 47       | 74.8  | 1.75                     |                         |             |                               |          |       |                          |                         |
| Tiskilwa*.....                   | 93                            | 52       | 71.9              | 6.97                     |                         | Council Bluffs.....                | 103                           | 57       | 77.4  | 1.57                     |                         |             |                               |          |       |                          |                         |
| Tuscolat*.....                   | 96                            | 49       | 73.9              | 2.61                     |                         | Cresco*.....                       | 96                            | 46       | 69.4  | 1.35                     |                         |             |                               |          |       |                          |                         |
| Walnut*.....                     | 93                            | 51       | 72.8              | 5.51                     |                         | Decorah*.....                      | 93                            | 46       | 68.7  | 1.98                     |                         |             |                               |          |       |                          |                         |
| Wheaton* <sup>3</sup> .....      | 95                            | 55       | 68.8              | 5.69                     |                         | Delaware* <sup>13</sup> .....      | 95                            | 52       | 68.6  | 2.50                     |                         |             |                               |          |       |                          |                         |
| Winchester* <sup>14</sup> .....  | 98                            | 56       | 73.3              | 5.18                     |                         | Desoto.....                        | 97                            | 49       | 74.7  | 2.71                     |                         |             |                               |          |       |                          |                         |
| Winnebago*.....                  | 91                            | 49       | 69.6              | 7.13                     |                         | Dows.....                          | 96                            | 48       | 70.0  | 3.16                     |                         |             |                               |          |       |                          |                         |
| <i>Indiana.</i>                  |                               |          |                   |                          |                         | Eldon.....                         | 99                            | 51       | 75.0  | 5.36                     |                         |             |                               |          |       |                          |                         |
| Anderson*.....                   | 91                            | 55       | 73.0              | 4.86                     |                         | Eldora.....                        | 98                            | 45       | 71.8  | 4.75                     |                         |             |                               |          |       |                          |                         |
| Angola.....                      |                               |          |                   | 4.10                     |                         | Elkader*.....                      | 97                            | 45       | 70.8  | 1.34                     |                         |             |                               |          |       |                          |                         |
| Auburn.....                      | 95                            | 49       | 71.9              | 2.50                     |                         | Esterville.....                    | 98                            | 43       | 68.7  | 4.30                     |                         |             |                               |          |       |                          |                         |
| Bedford.....                     | 98                            |          |                   | 2.75                     |                         | Fairfield*.....                    | 96                            | 49       | 73.2  | 3.53                     |                         |             |                               |          |       |                          |                         |
| Bloomington*.....                | 94                            | 56       | 75.0              | 4.43                     |                         | Fayette*.....                      | 93                            | 44       | 68.8  | 2.81                     |                         |             |                               |          |       |                          |                         |
| Bluffton*.....                   | 96                            | 47       | 72.9              | 1.73                     |                         | Forest City.....                   |                               |          |       |                          |                         |             |                               |          |       |                          |                         |

TABLE II.—*Meteorological record of voluntary and other cooperating observers—Continued.*

| Stations.               | Temperature.<br>(Fahrenheit.) |          |                   | Precipita-<br>tion.      |                         | Stations.                  | Temperature.<br>(Fahrenheit.) |          |       | Precipita-<br>tion.      |                         | Stations.            | Temperature.<br>(Fahrenheit.) |          |       | Precipita-<br>tion.      |                         |
|-------------------------|-------------------------------|----------|-------------------|--------------------------|-------------------------|----------------------------|-------------------------------|----------|-------|--------------------------|-------------------------|----------------------|-------------------------------|----------|-------|--------------------------|-------------------------|
|                         | Maximum.                      | Minimum. | Mean.             | Rain and melted<br>snow. | Total depth of<br>snow. |                            | Maximum.                      | Minimum. | Mean. | Rain and melted<br>snow. | Total depth of<br>snow. |                      | Maximum.                      | Minimum. | Mean. | Rain and melted<br>snow. | Total depth of<br>snow. |
| Kansas—Cont'd.          |                               |          |                   |                          |                         | Louisiana.                 |                               |          |       |                          |                         | Maryland—Cont'd.     |                               |          |       |                          |                         |
| Fallriver               | 99                            | 57       | 77.8              | 1.53                     | 2.25                    | Abbeville                  | 93                            | 71       | 80.9  | 9.70                     | In. s.                  | Westernport          | 96                            | 53       | 78.4  | 7.60                     | In. s.                  |
| Fanning                 |                               |          |                   |                          |                         | Alexandria†                | 96                            | 66       | 81.4  | 5.01                     |                         | Woodstock            | 92                            | 53       | 75.8  | 6.03                     |                         |
| Fort Riley †            | 101                           | 58       | 79.1              | 1.03                     |                         | Amitet                     | 97                            | 70       | 81.2  | 9.92                     |                         | Massachusetts.       |                               |          |       |                          |                         |
| Fort Scott              | 99                            | 57       | 77.4              | 0.80                     |                         | Bastrop †                  | 98                            | 64       | 81.4  | 3.67                     |                         | Adams                | 86                            | 45       | 68.1  |                          |                         |
| Frankfort               | 104                           | 46       | 78.0              | 2.41                     |                         | Baton Rouge†               | 95                            | 67       | 81.4  | 5.62                     |                         | Amherst              | 89                            | 44       | 70.1  | 6.42                     |                         |
| Garden City             | 98                            | 54       | 76.7              | 2.04                     |                         | Calhoun                    | 96                            | 64       | 80.0  | 2.26                     |                         | Attleboro            |                               |          |       |                          | 7.01                    |
| Garfield                |                               |          |                   |                          |                         | Cheneyville†               | 96                            | 67       | 81.5  | 3.66                     |                         | Bedford              | 88                            | 47       | 69.9  | 9.15                     |                         |
| Gibson                  | 105                           | 50       | 78.6              | 1.17                     |                         | Clinton†                   | 93                            | 68       | 79.8  | 7.71                     |                         | Bluehill (summit)    | 90                            | 51       | 70.3  | 6.56                     |                         |
| Gove*†                  | 103                           | 71       | 82.3              | 0.91                     |                         | Como                       | 96                            | 67       | 80.6  | 1.39                     |                         | Cambridge a          | 92                            | 49       | 72.4  | 7.29                     |                         |
| Grenola                 | 95                            | 56       | 75.6              | 3.01                     |                         | Covington                  | 96                            | 70       | 81.2  | 13.76                    |                         | Chestnut Hill        | 94                            | 48       | 72.6  | 6.06                     |                         |
| Halstead                | 98                            | 50       | 74.5              | 5.05                     |                         | Donaldsonville             | 96                            | 70       | 82.0  | 5.95                     |                         | Cohasset             |                               |          |       |                          | 8.95                    |
| Hays                    | 105                           | 49       | 78.8              | 1.40                     |                         | Emile                      | 92                            | 68       | 78.7  | 8.60                     |                         | Concord              | 92                            | 46       | 70.6  | 8.94                     |                         |
| Horton                  | 98                            | 58       | 77.7              | 2.07                     |                         | Farmerville                | 94                            | 64       | 79.9  | 3.67                     |                         | Dudley†              | 90                            | 50       | 66.4  | 5.77                     |                         |
| Hoxie                   | 48                            | .....    | 0.00              |                          |                         | Franklin†                  | .....                         | 76       | ..... | 11.60                    |                         | East Templeton*†     | 88                            | 53       | 66.8  | 6.91                     |                         |
| Hutchinson              |                               |          |                   |                          |                         | Grand Coteau               | 95                            | 69       | 81.4  | 5.23                     |                         | Fallriver            | 87                            | 56       | 72.0  | 7.43                     |                         |
| Independence            | 98                            | 59       | 78.6              | 2.31                     |                         | Hammond                    | 97                            | 70       | 81.5  | 10.78                    |                         | Fiskedale            |                               |          |       |                          | 7.28                    |
| Lawrence                | 94                            | 56       | 77.0              | 3.46                     |                         | Jeanerette                 | 100                           | 67       | 81.5  | 11.97                    |                         | Fitchburg a*†        | 88                            | 53       | 69.6  | 7.80                     |                         |
| Lebanon                 | 105                           | .....    | 1.00              |                          |                         | Jennings                   | 96                            | .....    | ..... | 5.86                     |                         | Fitchburg b          | 90                            | 47       | 70.8  | 7.67                     |                         |
| Lebu†                   | 95                            | 56       | 76.6              | 5.01                     |                         | Lafayette                  | 95                            | 69       | 81.2  | 10.99                    |                         | Framingham           | 92                            | 45       | 72.4  | 7.42                     |                         |
| Macksville              | 99                            | 53       | 76.1              | 2.63                     |                         | Lake Charles†              | 98                            | 63       | 82.6  | 6.81                     |                         | Groton               | 90                            | 44       | 69.8  | 8.94                     |                         |
| McPherson               | 104                           | 54       | 79.9              | 2.56                     |                         | Lake Providence            | 96                            | 69       | 82.2  | 4.22                     |                         | Hyannis*†            | 85                            | 55       | 70.7  | 4.46                     |                         |
| Manhattan b             | 104                           | 58       | 79.4              | 1.78                     |                         | Lawrence                   | 93                            | 70       | 82.0  | 10.27                    |                         | Jefferson            |                               |          |       |                          | 11.89                   |
| Manhattan c             | 102                           | 50       | 77.9              | 1.52                     |                         | Liberty Hill               | 102                           | 64       | 81.7  | 3.70                     |                         | Lawrence             | 91                            | 50       | 72.0  | 7.56                     |                         |
| Marion†                 | 99                            | 55       | 81.5              | 2.25                     |                         | Mansfield                  | 96                            | 75       | 80.5  | 2.72                     |                         | Leeds                | 90                            | 43       | 68.9  | 6.87                     |                         |
| Mead†                   | 108                           | 60       | 82.8              | 0.46                     |                         | Melville                   | 95                            | 69       | 81.2  | 2.93                     |                         | Leicester Hill       | 90                            | 49       | 69.6  | 9.34                     |                         |
| Medicine Lodge†         | 101                           | 56       | 79.0              | 2.54                     |                         | Minden                     | 98                            | 58       | 81.6  | 3.67                     |                         | Leominster           |                               |          |       |                          | 9.30                    |
| Minneapolis†            | 108                           | 47       | 81.2              | 0.71                     |                         | Monroe†                    | 97                            | 68       | 81.8  | 3.96                     |                         | Long Plain           |                               |          |       |                          | 7.06                    |
| Moranton†               | 92                            | 56       | 75.4              | 4.04                     |                         | Montgomery                 | 99                            | 66       | 82.6  | 3.49                     |                         | Lowell a             | 89                            | 48       | 71.9  | 8.23                     |                         |
| Mounthope*†             | 97                            | 64       | 78.0              | 2.96                     |                         | Oakridge                   | 100                           | 65       | 81.8  | 4.62                     |                         | Lowell b             | 92                            | 46       | 71.2  |                          |                         |
| Ness City               | 102                           | 56       | 80.3              | 1.86                     |                         | Opelousas                  | 95                            | 67       | 81.2  | 5.58                     |                         | Ludlow               | 85                            | 41       | 68.0  | 8.80                     |                         |
| Newton                  | 100                           | 54       | 77.4              | 4.18                     |                         | Oxford                     | 98                            | 63       | 80.8  | 1.59                     |                         | Mansfield*           | 89                            | 47       | 69.6  | 8.25                     |                         |
| Norton                  |                               |          |                   |                          |                         | Paincourtville†            | 96                            | 69       | 81.4  | 8.00                     |                         | Middleboro           | 88                            | 44       | 71.2  | 5.29                     |                         |
| Norwich                 |                               |          |                   |                          |                         | Plain Dealing†             | 99                            | 61       | 80.9  | 3.45                     |                         | Monson               | 90                            | 45       | 70.8  | 10.00                    |                         |
| Oberlin                 |                               |          |                   |                          |                         | Plaquemine                 | 96                            | 69       | 81.3  | 6.33                     |                         | New Bedford a        | 86                            | 52       | 70.8  | 7.68                     |                         |
| Olathe†                 | 94                            | 55       | 76.3              | 5.27                     |                         | Rayne†                     | 98                            | 69       | 82.0  | 4.17                     |                         | New Bedford b        | 88                            | 46       | 71.2  | 7.32                     |                         |
| Osage City†             | 96                            | 55       | 77.2              | 6.30                     |                         | Robeline                   | 97                            | 62       | 78.4  | 3.55                     |                         | New Salem            | 87                            | 50       | 69.0  | 5.84                     |                         |
| Oswego                  | 96*                           | 58       | 78.2              | 3.60                     |                         | Ruston                     | 93                            | 60       | 77.4  | 2.31                     |                         | Pittsfield           | 86                            | 45       | 68.8  | 9.26                     |                         |
| Ottawa                  | 96                            | 53       | 74.8              | 4.93                     |                         | Schriever                  | 88                            | .....    | ..... | 8.02                     |                         | Plymouth*†           | 87                            | 57       | 71.5  | 4.91                     |                         |
| Phillipsburg            | 106                           | 50       | 77.3              | 1.57                     |                         | Shellbeach                 | 93                            | 73       | 82.0  | 2.63                     |                         | Princeton            |                               |          |       |                          | 9.96                    |
| Pratt                   | 103                           | 51       | 80.0              | 4.80                     |                         | Southern University†       | 92                            | 68       | 78.5  | 5.80                     |                         | Provincetown         | 85                            | 56       | 71.5  | 5.84                     |                         |
| Rome*†                  | 96                            | 59       | 76.6              | 4.88                     |                         | Sugar Ex. Station†         | 93                            | 71       | 80.6  | 7.58                     |                         | Somerset*†           | 93                            | 52       | 75.1  | 5.60                     |                         |
| Russell                 | 107                           | 50       | 79.6              | 1.39                     |                         | Sugartown                  | 92                            | 69       | 80.7  | 7.98                     |                         | South (Clinton       |                               |          |       |                          | 10.72                   |
| Salina†                 | 106                           | 60       | 81.2              | 0.97                     |                         | Venice†                    | 91                            | 69       | 79.8  | 14.39                    |                         | Springfield Armory   | 92                            | 40       | 69.2  | 6.52                     |                         |
| Sedan†                  | 96                            | 58       | 77.2              | 8.23                     |                         | Wallace                    | 96                            | 70       | 80.9  | 10.17                    |                         | Sterling             |                               |          |       |                          | 9.88                    |
| Toronto                 | 102                           | 55       | 77.2              | 1.77                     |                         | Whitehall                  | 97                            | 68       | 80.4  | .....                    |                         | Taunton b            | 89                            | 42       | 70.8  | 5.07                     |                         |
| Ulysses                 |                               |          |                   | 2.65                     |                         | White Sulphur Springs      | 97                            | 59       | 80.4  | 4.79                     |                         | Taunton c            | 89                            | 42       | 71.0  | 5.07                     |                         |
| Viroqua†                | 101                           | 54       | 77.4              | 2.68                     |                         | Maine.                     |                               |          |       |                          |                         | Webster              |                               |          |       |                          | 6.79                    |
| Wallace                 |                               |          |                   | 1.20                     |                         | Bar Harbor                 | 86                            | 46       | 67.2  | 1.92                     |                         | Westboro†            | 88                            | 44       | 72.3  | 9.02                     |                         |
| Wamego*†                | 100                           | 56       | 80.1              | 2.28                     |                         | Belfast*†                  | 81                            | 61       | 67.9  | 2.31                     |                         | Weston               | 88                            | 46       | 70.0  | 7.15                     |                         |
| Winfield                |                               |          |                   | 3.69                     |                         | Calais                     | 84                            | 43       | 67.0  | 2.98                     |                         | Williamstown         | 85                            | 46       | 66.6  | 8.51                     |                         |
| Winona                  |                               |          |                   | 2.00                     |                         | Cornish*†                  | 91                            | 48       | 65.9  | 3.13                     |                         | Winchendon           |                               |          |       |                          | 5.89                    |
| Yates Center            | 96                            | 54       | 76.2              | 2.06                     |                         | Cumberland Mills           | 92                            | 47       | 71.7  | 2.79                     |                         | Worcester a          | 87                            | 52       | 73.5  | 9.69                     |                         |
| Kentucky.               |                               |          |                   |                          |                         | Fairfield                  | 85                            | 43       | 67.8  | 3.71                     |                         | Michigan.            |                               |          |       |                          |                         |
| Alpha* <sup>2</sup>     | 66                            | 77.6     | 9.86              |                          |                         | Farmington                 | 88                            | 39       | 68.0  | 3.27                     |                         | Adrian               | 96                            | 44       | 71.2  | 1.80                     |                         |
| Ashland                 | 96                            | 59       | 77.2              | 3.67                     |                         | Flagstaff                  | 87                            | 83       | 68.6  | 3.60                     |                         | Agricultural College | 95                            | 43       | 69.0  | 2.73                     |                         |
| Bardstown†              | 98                            | 59       | 77.4              | 2.02                     |                         | Gardiner                   | 91                            | 48       | 71.0  | 3.73                     |                         | Allegan              | 94                            | 45       | 69.6  | 0.91                     |                         |
| Blandville†             | 92                            | 59       | 78.6              | 3.99                     |                         | Kineo                      | 90                            | 50       | 67.0  | 3.30                     |                         | Alma                 | 93                            | 43       | 68.7  | 4.33                     |                         |
| Bowling Green b†        | 94                            | 61       | 78.2              | 3.80                     |                         | Lewiston                   | 89                            | 48       | 71.1  | 2.21                     |                         | An Arbor             | 100                           | 46       | 72.8  | 1.16                     |                         |
| Burnside†               |                               |          |                   | 6.98                     |                         | Mayfield *†                | 83                            | 45       | 65.5  | 4.43                     |                         | Arbela               | 97                            | 42       | 69.8  | 3.07                     |                         |
| Caddo                   | 94                            | 58       | 76.4              | 3.29                     |                         | North Bridgton             | 91                            | 46       | 69.6  | 2.46                     |                         | Badaxe               | 91                            | 45       | 68.8  | 3.65                     |                         |
| Canton*†                | 95                            | 60       | 78.3              | 2.82                     |                         | Orono                      | 85                            | 41       | 67.5  | 3.14                     |                         | Baldwin              | 94                            | 40       | 66.0  | 2.74                     |                         |
| Carlisle                | 96                            | 57       | 77.0              | 3.77                     |                         | Petit Menan*†              | 78                            | 50       | 59.7  | .....                    |                         | Ball Mountain        | 96                            | 46       | 65.0  | 1.47                     |                         |
| Carrollton              | 98                            | 62       | 79.0              | 2.82                     |                         | Winslow                    | 88                            | 40       | 67.0  | 3.09                     |                         | Baraga               | 93                            | 40       | 63.0  | 2.89                     |                         |
| Catlettsburg            |                               |          |                   | 6.93                     |                         | Maryland.                  |                               |          |       |                          |                         | Battle Creek         | 97                            | 48       | 71.9  | 1.47                     |                         |
| Earlington              | 98                            | 58       | 78.1              | 2.19                     |                         | Annapolis                  | 94                            | 61       | 80.8  | 2.81                     |                         | Bay City b           | 93                            | 47       | 68.2  | 2.96                     |                         |
| Edmonton†               | 90                            | 58       | 74.9              | 2.04                     |                         | Bachmans Valley            | 91                            | 51       | 76.9  | 4.98                     |                         | Berlin               | 97                            | 40       | 69.4  | 1.43                     |                         |
| Ensor                   | 93                            | 58       | 78.1              | 4.34                     |                         | Boettcherville             | 98                            | 50       | 74.4  | 5.15                     |                         | Berrien Springs      | 97                            | 49       | 71.6  | 2.48                     |                         |
| Eubank                  | 92                            | 58       | 74.7              | 3.40                     |                         | Charlotte Hall†            | 97                            | 55       | 76.4  | 4.00                     |                         | Big Point Sable      | 82                            | 50       | 65.9  | 5.08                     |                         |
| Falmouth†               |                               |          |                   | 3.74                     |                         | Cherryfields† <sup>2</sup> |                               |          |       |                          |                         | Big Rapids           | 90                            | 44       | 66.8  | 1.19                     |                         |
| Frankfort               | 91 <sup>a</sup>               | 58       | 74.6 <sup>b</sup> | 3.94                     |                         | Chestertown                | 90                            | 57       | 76.0  | 7.62                     |                         | Birmingham           | 98                            | 48       | 71.9  | 1.19                     |                         |
| Georgetown <sup>1</sup> | 92                            | 61       | 77.0              |                          |                         | Collegepark                | 96                            | 54       | 77.0  | 6.08                     |                         | Boon                 | 89                            | 39       | 63.9  | 5.85                     |                         |
| Greensburg†             | 99                            | 58       | 77.7              | 1.81                     |                         | Cumberland b               | 93                            | 57       | 75.3  | 6.17                     |                         | Calumet              | 80                            | 47       | 61.5  | 3.62                     |                         |
| Henderson†              | 98                            | 60       | 78.6              | 1.98                     |                         | Darlington†                | 90                            | 59       | 74.3  | 10.39                    |                         | Camden               | 96                            | 45       | 70.8  | 3.03                     |                         |
| Hopkinsville†           | 96                            | 59       | 78.6              | 1.73                     |                         | Deerpark                   | 89                            | 46       | 67.0  | 7.01                     |                         | Carsonville          | 96                            | 43       | 68.8  | 1.12                     |                         |
| Irvington               | 98                            | 60       | 75.8              | 6.19                     |                         | Easton†                    | 95                            | 57       | 77.6  | 4.98                     |                         | Charlevoix           | 91                            | 49       | 65.4  | 4.12                     |                         |
| Leitchfield†            | 95                            | 59       | 76.1              | 1.59                     |                         | Ellicott City              | 93                            | 53       | 74.3  | 6.15                     |                         | Cheboygan            | 94                            | 42       | 65.1  | 2.45                     |                         |
| Loretto                 | 95                            | 58       | 76.1              | 3.18                     |                         | Fallston                   | 88                            | 55       | 73.8  | 9.35                     |                         | Clinton              | 97                            | 42       | 72.3  | 1.64                     |                         |
| Maysville               | 97                            | 55       | 77.2              | 5.47                     |                         | Frederick                  | 94                            | 54       | 76.4  | 6.34                     |                         | Coldwater            | 98                            | 47       | 70.8  | 4.96                     |                         |
| Middlesboro†            | 92                            | 58       | 76.2              | 5.55                     |                         | Frostburg                  | 88                            | 48       | 70.0  | 7.05                     |                         | East Tawas           |                               |          |       |                          |                         |

TABLE II.—*Meteorological record of voluntary and other cooperating observers—Continued.*

| Stations.                            | Temperature.<br>(Fahrenheit.) |                 |                   | Precipita-<br>tion.      |                         | Stations.                   | Temperature.<br>(Fahrenheit.) |          |                   | Precipita-<br>tion.      |                         | Stations.                   | Temperature.<br>(Fahrenheit.) |          |       | Precipita-<br>tion.      |                         |
|--------------------------------------|-------------------------------|-----------------|-------------------|--------------------------|-------------------------|-----------------------------|-------------------------------|----------|-------------------|--------------------------|-------------------------|-----------------------------|-------------------------------|----------|-------|--------------------------|-------------------------|
|                                      | Maximum.                      | Minimum.        | Mean.             | Rain and melted<br>snow. | Total depth of<br>snow. |                             | Maximum.                      | Minimum. | Mean.             | Rain and melted<br>snow. | Total depth of<br>snow. |                             | Maximum.                      | Minimum. | Mean. | Rain and melted<br>snow. | Total depth of<br>snow. |
| <i>Michigan—Cont'd.</i>              | 0                             | 0               | 0                 | In.                      | In.                     | <i>Minnesota—Cont'd.</i>    | 0                             | 0        | 0                 | In.                      | In.                     | <i>Missouri—Cont'd.</i>     | 0                             | 0        | 0     | In.                      | In.                     |
| Hayes                                | 90                            | 45              | 65.5              | 3.57                     | 1.57                    | Koochicking                 | 85                            | 37       | 62.0              | 1.80                     | 1.80                    | Aurthur * <sup>a</sup>      | 68                            | 75.2     | 1.63  | In.                      | In.                     |
| Highland Station                     | 93                            | 45              | 69.8              | 2.88                     |                         | Lake City                   | 98                            | 45       | 69.5              | 3.34                     |                         | Avalon                      | 94                            | 53       | 75.0  | 2.46                     |                         |
| Hilldale                             | 93                            | 56              | 71.0              |                          |                         | Lake Jennie                 | 92                            | 47       | 68.9              | 5.92                     |                         | Bethany                     | 95                            | 50       | 75.4  | 3.00                     |                         |
| Holland * <sup>10</sup>              | 82                            | 56              | 71.0              |                          |                         | Lakeside †                  | 91                            | 45       | 68.4              | 5.71                     |                         | Birchtree                   | 93                            | 54       | 73.8  | 4.75                     |                         |
| Humboldt                             | 93                            | 31              | 58.4              | 0.77                     |                         | Lake Winnibigoshish         | 92                            | 42       | 63.0              | 2.80                     |                         | Bolckow                     |                               |          |       | 0.40                     |                         |
| Ionia                                | 95 <sup>e</sup>               | 47 <sup>e</sup> | 69.8 <sup>e</sup> | 3.19                     |                         | Leech Lake                  | 87                            | 40       | 64.6              | 4.65                     |                         | Boonville †                 |                               |          |       | 1.28                     |                         |
| Iron River                           | 93                            | 30              | 59.2              | 2.19                     |                         | Lutsen                      | 79                            | 43       | 61.1              | 3.32                     |                         | Brunswick                   | 92                            | 55       | 74.6  | 5.15                     |                         |
| Ishpeming                            | 93                            | 38              | 61.3              | 1.25                     |                         | Luvernet                    | 96                            | 47       | 69.4              | 4.08                     |                         | Carrollton †                | 94                            | 57       | 76.2  | 3.42                     |                         |
| Ivan                                 | 90                            | 42              | 65.6              | 4.90                     |                         | Lynd                        | 100                           | 44       | 67.6              | 2.74                     |                         | Conception                  | 95                            | 54       | 75.0  | 1.52                     |                         |
| Jackson                              | 97                            | 45              | 71.0              | 2.16                     |                         | Mapleplain                  |                               |          |                   |                          |                         | Cowgill †                   | 99                            | 50       | 77.3  | 5.00                     |                         |
| Jeddo                                | 97                            | 46              | 68.8              | 2.45                     |                         | Milaca                      | 92                            | 40       | 64.4              | 2.38                     |                         | Darksville                  |                               |          |       | 1.90                     |                         |
| Kalamazoo                            | 97                            | 50              | 71.8              | 1.97                     |                         | Milan†                      | 90                            | 40       | 68.2              | 2.61                     |                         | Downing                     |                               |          |       | 2.66                     |                         |
| Lake City                            | 90                            | 42              | 65.4              | 5.85                     |                         | Minneapolis <sup>a</sup>    | 95                            | 44       | 68.8              | 3.01                     |                         | East Lynne * <sup>a</sup>   | 57                            | 72.1     | 3.75  |                          |                         |
| Lansing                              | 93                            | 48              | 69.8              | 3.32                     |                         | Minneapolis <sup>b</sup>    | 95*                           | 42       | 67.1              | 2.78                     |                         | Edzehill * <sup>b</sup>     | 90                            | 58       | 74.3  | 6.88                     |                         |
| Lapeer                               | 92                            | 41              | 69.0              | 1.35                     |                         | Minnesota City †            |                               |          |                   |                          |                         | Eightmile * <sup>a</sup>    | 91                            | 58       | 73.2  | 3.78                     |                         |
| Lathrop                              | 95                            | 32              | 60.6              | 1.96                     |                         | Montevideo                  | 96                            | 45       | 67.9              | 6.17                     |                         | Eldon                       | 99                            |          |       | 2.44                     |                         |
| Ludington                            | 84                            | 40              | 65.4              | 2.61                     |                         | Morris                      | 94                            | 44       | 67.8              | 0.86                     |                         | Elmira                      | 96                            | 50       | 75.2  | 3.56                     |                         |
| Luzerne                              | 87                            | 39              | 64.0              | 4.55                     |                         | Mount Iron                  | 91                            | 37       | 60.9              | 3.40                     |                         | Fairport                    |                               |          |       | 4.24                     |                         |
| Mackinaw City                        | 90                            | 39              | 62.9              | 4.58                     |                         | Newfolden                   | 88                            | 37       | 63.7              | 1.11                     |                         | Farmersville                |                               |          |       | 4.53                     |                         |
| Madison                              | 96                            | 45              | 72.8              | 2.15                     |                         | New London                  | 100                           | 46       | 68.8              | 3.02                     |                         | Fayette                     |                               |          |       | 1.44                     |                         |
| Mancelona                            | 88                            | 40              | 64.0              | 5.08                     |                         | New Richland * <sup>a</sup> | 94                            | 56       | 68.5              |                          |                         | Fulton                      |                               |          |       | 1.29                     |                         |
| Manistee                             | 92                            | 38              | 67.2              | 2.90                     |                         | New Ulm †                   | 96                            | 40       | 68.2              | 5.88                     |                         | Gallatin * <sup>a</sup>     | 99                            | 56       | 76.5  | 5.39                     |                         |
| Manistique                           | 80                            | 38              | 62.4              | 3.30                     |                         | Park Rapids †               | 85                            | 38       | 62.3              | 2.85                     |                         | Glasgow                     | 98                            | 52       | 76.7  | 1.60                     |                         |
| Middle Island * <sup>10</sup>        | 85                            | 56              | 66.2              |                          |                         | Pine River                  | 88                            | 44       | 64.6              | 3.75                     |                         | Gordonville * <sup>a</sup>  | 61                            | 72.8     | 3.79  |                          |                         |
| Midland                              | 93                            | 45              | 69.0              | 3.00                     |                         | Pipestone                   |                               |          |                   |                          |                         | Gorin                       |                               |          |       | 4.71                     |                         |
| Mottville                            | 86                            | 48              | 70.4              | 5.16                     |                         | Pleasant Mounds             | 93                            | 47       | 68.6              | 4.33                     |                         | Halfway                     | 93                            | 52       | 75.3  | 3.47                     |                         |
| Mount Clemens                        | 100                           | 45              | 70.5              | 0.75                     |                         | Pokegama Falls.             | 86                            | 36       | 61.8              | 4.01                     |                         | Harrisonville †             | 97                            | 55       | 75.6  | 4.10                     |                         |
| Mount Pleasant <sup>b</sup>          | 91                            | 46              | 69.4              | 4.49                     |                         | Redwing                     |                               |          |                   |                          |                         | Hermann †                   |                               |          |       | 0.84                     |                         |
| Muskallongee Lake * <sup>10</sup>    | 81                            | 46              | 60.8              |                          |                         | Reeds                       |                               |          |                   |                          |                         | Houston                     | 94                            | 52       | 74.8  | 5.07                     |                         |
| Muskegon                             | 85                            | 51              | 68.4              | 2.20                     |                         | Folling Green               | 93                            | 47       | 68.2              | 2.60                     |                         | Houstonia                   |                               |          |       | 1.97                     |                         |
| Newberry                             | 88                            | 28              | 59.4              | 2.42                     |                         | Roseau                      | 86 <sup>c</sup>               | 33       | 61.6 <sup>c</sup> | 1.32                     |                         | Irena                       |                               |          |       | 1.88                     |                         |
| North Manitou Island * <sup>10</sup> | 84                            | 55              | 68.2              |                          |                         | St. Charles †               | 97                            | 42       | 69.0              | 1.97                     |                         | Ironon †                    | 96                            | 52       | 74.3  | 9.50                     |                         |
| North Marshall                       | 97                            | 45              | 70.6              | 1.39                     |                         | St. Cloud                   | 91                            | 46       | 66.9              | 3.34                     |                         | Jefferson City †            | 103                           | 51       | 77.3  | 1.67                     |                         |
| Northport                            | 86                            | 48              | 65.0              | 2.95                     |                         | St. Olaf                    | 91                            | 46       | 67.6              | 2.38                     |                         | Kidder                      | 93                            | 50       | 74.2  | 5.26                     |                         |
| Old Mission                          | 89                            | 51              | 66.6              | 4.67                     |                         | St. Peter                   | 89                            |          |                   |                          |                         | Lamar †                     | 98                            | 55       | 77.6  | 2.53                     |                         |
| Olivet                               | 93                            | 49              | 69.9              | 2.64                     |                         | Sandy Lake Dam              | 85                            | 39       | 62.6              | 3.12                     |                         | Lamonte                     |                               |          |       | 0.70                     |                         |
| Omer                                 | 94                            | 37              | 65.5              | 4.22                     |                         | Shakopee                    | 95                            | 48       | 70.8              | 3.08                     |                         | Lebanon                     | 92                            | 59       | 75.8  | 1.95                     |                         |
| Ottawa Point * <sup>10</sup>         | 94                            | 50              | 68.3              |                          |                         | Slayton                     | 99                            | 45       | 68.6              | 2.73                     |                         | Lexington                   | 97                            | 53       | 78.7  | 5.51                     |                         |
| Ovid                                 | 95                            | 44              | 70.4              | 2.09                     |                         | Tower †                     | 85                            |          |                   |                          |                         | Liberty                     | 93                            | 54       | 75.3  | 4.82                     |                         |
| Owosso                               | 101                           | 43              | 71.6              | 2.50                     |                         | Two Harbors                 | 88                            | 45       | 68.3              | 3.73                     |                         | Louisiana                   | 100                           | 55       | 76.1  | 1.34                     |                         |
| Parkville                            |                               |                 |                   | 4.59                     |                         | Wahasha * <sup>a</sup>      | 102                           | 51       | 69.1              | 2.40                     |                         | McCune * <sup>a</sup>       | 97                            | 61       | 75.8  | 2.34                     |                         |
| Pentwater * <sup>10</sup>            | 84                            | 56              | 69.4              |                          |                         | Willmar                     | 92                            | 45       | 67.6              | 4.36                     |                         | Marblehill                  | 96                            | 52       | 75.0  | 3.49                     |                         |
| Petoskey                             | 91                            | 44              | 63.5              | 3.08                     |                         | Winnebago City              | 95                            | 46       | 68.4              | 5.10                     |                         | Marshall †                  | 96                            | 52       | 75.5  | 1.49                     |                         |
| Plymouth                             | 98                            | 44 <sup>d</sup> | 70.9              | 1.47                     |                         | Worthington                 | 94                            | 47       | 68.3              | 4.11                     |                         | Maryville                   | 101                           | 50       | 75.5  | 1.87                     |                         |
| Pointe aux Barques * <sup>10</sup>   | 92                            | 52              | 69.8              |                          |                         | Zumbrota †                  | 98*                           | 42       | 69.6              |                          |                         | Mexico †                    | 100                           | 56       | 77.2  | 0.72                     |                         |
| Point Betsey * <sup>10</sup>         | 79                            | 54              | 66.6              |                          |                         | <i>Mississippi.</i>         |                               |          |                   |                          |                         | Miami                       |                               |          |       | 2.57                     |                         |
| Port Austin                          | 93                            | 43              | 66.0              | 4.48                     |                         | Aberdeen                    | 100                           | 62       | 80.2              | 4.08                     |                         | Mineralspring               | 99                            | 58       | 72.4  | 6.74                     |                         |
| Powers                               | 95                            | 36              | 62.2              |                          |                         | Agricultural College        | 95                            | 67       | 79.8              | 5.71                     |                         | Montreal                    | 95                            | 58       | 75.0  | 0.69                     |                         |
| Reed City                            | 93                            | 43              | 66.8              | 1.37                     |                         | Batesville †                | 96                            | 63       | 79.0              | 2.99                     |                         | Mount Vernon                | 99                            | 56       | 78.2  | 5.86                     |                         |
| Rockland                             | 84                            | 42              | 62.2              |                          |                         | Bay St. Louis               | 95                            | 62       | 78.2              | 4.11                     |                         | Neosho                      | 94                            | 52       | 75.1  | 3.38                     |                         |
| Rogers                               | 85                            | 44              | 62.8              | 3.15                     |                         | Biloxi †                    | 97                            | 70       | 80.0              | 12.49                    |                         | Nevada                      | 98                            | 53       | 75.0  | 0.41                     |                         |
| Saginaw                              | 96                            | 47              | 70.8              | 4.72                     |                         | Booneville                  | 98                            | 64       | 79.6              | 2.33                     |                         | New Haven                   | 97                            | 58       | 77.2  | 1.64                     |                         |
| St. Ignace                           | 84                            | 42              | 64.1              | 3.30                     |                         | Briars                      | 90                            | 69       | 79.7              | 3.98                     |                         | New Madrid                  | 99                            | 60       | 80.0  | 6.82                     |                         |
| St. Johns                            | 96                            | 46              | 71.4              | 0.96                     |                         | Ebrookhaven †               | 101                           | 65       | 82.0              | 9.43                     |                         | New Palestine               | 98                            | 58       | 76.6  | 1.65                     |                         |
| St. Joseph                           | 90                            | 52              | 69.4              | 2.42                     |                         | Canton †                    | 99                            | 67       | 80.4              | 8.61                     |                         | Oakfield                    | 96                            | 58       | 77.0  | 1.63                     |                         |
| Sandbeach                            | 92                            | 49              | 67.4              | 3.89                     |                         | Columbus <sup>a</sup>       |                               |          |                   |                          |                         | Olden †                     | 95                            | 58       | 74.6  | 3.96                     |                         |
| Sidnaw                               | 96                            | 30              | 60.7              | 2.25                     |                         | Columbus <sup>b</sup>       | 105                           | 62       | 82.8              | 2.34                     |                         | Oregon <sup>a</sup>         | 98                            | 51       | 77.4  | 1.82                     |                         |
| Somerset                             | 93                            | 45              | 71.2              | 2.11                     |                         | Corinth                     | 96                            | 64       | 79.4              | 2.08                     |                         | Oregon <sup>b</sup>         | 100                           | 54       | 78.5  | 1.96                     |                         |
| South Haven                          | 90                            | 47              | 69.1              | 1.70                     |                         | Crystal Springs †           | 95                            | 67       | 79.6              | 4.31                     |                         | Osceola †                   |                               |          |       | 1.55                     |                         |
| Stanton                              | 91                            | 46              | 69.0              | 3.77                     |                         | Edwards                     | 98                            | 70       | 82.3              | 6.92                     |                         | Oto                         |                               |          |       | 7.20                     |                         |
| Sturgeon Point * <sup>10</sup>       | 90                            | 45              | 66.5              |                          |                         | Fayette                     | 96                            | 68       | 80.7              | 7.12                     |                         | Palmyra * <sup>a</sup>      | 98                            | 60       | 77.4  | 0.90                     |                         |
| Th. maston                           | 93                            | 40              | 65.6              | 0.80                     |                         | French Camps                | 95                            | 59       | 76.7              | 6.00                     |                         | Phillipsburg * <sup>a</sup> | 94                            | 62       | 74.4  | 1.32                     |                         |
| Thornville                           | 87                            | 45              | 70.1              | 2.27                     |                         | Greenville <sup>a</sup>     | 91                            | 68       | 79.2              | 7.95                     |                         | Pickering * <sup>a</sup>    | 94                            | 55       | 72.3  | 8.12                     |                         |
| Thunder Bay Island * <sup>10</sup>   | 90                            | 56              | 67.0              |                          |                         | Greenville <sup>b</sup>     | 94                            | 68       | 80.8              | 7.51                     |                         | Platte River                | 95                            | 58       | 78.5  | 8.67                     |                         |
| Traverse City                        | 94                            | 44              | 65.0              | 4.87                     |                         | Greenwood                   | 95                            | 67       | 80.2              | 1.88                     |                         | Poplarbluff                 | 90                            | 44       | 67.4  | 4.26                     |                         |
| Two Heart River * <sup>10</sup>      | 86                            | 40              | 61.6              |                          |                         | Hattiesburg †               | 98                            | 70       | 82.1              | 2.30                     |                         | Princeton                   | 102                           | 52       | 77.6  | 3.61                     |                         |
| Vandalia                             | 93                            | 50              | 70.7              | 3.76                     |                         | Hazlehurst                  | 98                            | 69       | 81.4              | 1.89                     |                         | Rhineland                   | 98                            | 54       | 76.0  | 1.66                     |                         |
| Vassar                               | 95                            | 39              | 68.8              | 2.93                     |                         | Hernando                    | 96                            | 64       | 79.8              | 3.35                     |                         | Richmond                    | 95                            | 57       | 76.8  | 4.87                     |                         |
| Vermillion Point * <sup>10</sup>     | 78                            | 38              | 65.2              |                          |                         | Holly Springs †             | 94                            | 64       | 79.4              | 3.74                     |                         | Rolla                       |                               |          |       | 2.54                     |                         |
| Wasepi                               | 93                            | 48              | 70.0              | 4.96                     |                         | Jackson †                   | 99                            | 69       | 80.8              | 7.07                     |                         | St. Charles                 | 96                            | 60       | 77.3  | 1.91                     |                         |
| Waverly                              | 92                            | 45              | 68.2              | 1.39                     |                         | Lake †                      | 97                            | 66       | 78.8              | 7.87                     |                         | St. Joseph                  |                               |          |       | 5.26                     |                         |
| West Harrisville                     | 91                            | 45              | 65.4              | 4.12                     |                         | Leakesville                 | 99                            | 68       | 81.2              | 8.66                     |                         | Sarcocie * <sup>a</sup>     | 95                            | 64       | 74.2  | 8.67                     |                         |
| Wetmore                              | 91                            | 31              | 61.0              | 2.74                     |                         | Logtown †                   | 93                            | 67       | 79.8              | 11.38                    |                         | Sedalia †                   | 97                            | 53       | 76.8  | 1.28                     |                         |
| White Cloud                          | 89                            | 45              | 68.6              | 2.72                     |                         | Louisville †                | 97                            | 65       | 78.8              | 6.00                     |                         | Seymour                     | 90                            | 53       | 78.6  | 5.96                     |                         |
| Williston                            | 91                            | 43              | 69.4              | 2.59                     |                         | Macon †                     | 99                            | 68       | 81.0              | 6.07                     |                         | Shelbina                    |                               |          |       | 0.50                     |                         |
| Ypsilanti                            | 96                            | 48              | 71.0              | 1.05                     |                         | Magnolia †                  | 92                            | 68       | 78.9              | 8.46                     |                         | Sikeston                    | 96                            | 57       | 77.0  | 2.70                     |                         |
| Adat                                 |                               | </              |                   |                          |                         |                             |                               |          |                   |                          |                         |                             |                               |          |       |                          |                         |

TABLE II.—*Meteorological record of voluntary and other cooperating observers—Continued.*

| Stations.                  | Temperature.<br>(Fahrenheit.) |                 |                   | Precipita-<br>tion.      |                         | Stations.                     | Temperature.<br>(Fahrenheit.) |                 |                   | Precipita-<br>tion.      |                             | Stations. | Temperature.<br>(Fahrenheit.) |                   |       | Precipita-<br>tion.         |                         |
|----------------------------|-------------------------------|-----------------|-------------------|--------------------------|-------------------------|-------------------------------|-------------------------------|-----------------|-------------------|--------------------------|-----------------------------|-----------|-------------------------------|-------------------|-------|-----------------------------|-------------------------|
|                            | Maximum.                      | Minimum.        | Mean.             | Rain and melted<br>snow. | Total depth of<br>snow. |                               | Maximum.                      | Minimum.        | Mean.             | Rain and melted<br>snow. | Total depth of<br>snow.     |           | Maximum.                      | Minimum.          | Mean. | Rain and melted<br>snow.    | Total depth of<br>snow. |
| <b>Montana—Cont'd.</b>     |                               |                 |                   |                          |                         |                               |                               |                 |                   |                          |                             |           |                               |                   |       |                             |                         |
| Dearborn Canyon            | 92                            | 40              | 65.6              | 1.05                     | Ins.                    | Lincoln d†                    | 102                           | 50              | 77.4              | 2.53                     | Nebraska—Cont'd.            | o         | o                             | o                 | Ins.  | Nevada—Cont'd.              |                         |
| Dupuyer                    | 94                            | 38              | 65.6              | .....                    |                         | Lodgepole†                    | 103                           | 42              | 72.9              | 0.00                     | Mill City                   | 105j      | 56j                           | 74.3j             | 0.00  | Mill City                   |                         |
| Fort Benton                | 98                            | 45              | 71.9              | 0.30                     |                         | Loup b†                       | 102                           | 50              | 72.3              | 2.74                     | Monitor Mill                | 95        | 42                            | 69.8              | 1.11  | Monitor Mill                |                         |
| Fort Keogh†                | 102                           | 48              | 74.1              | 0.47                     |                         | Lynch†                        | 104                           | 56              | 72.0              | 2.03                     | Osceola                     | 95        | 60                            | 78.4              | 1.13  | Osceola                     |                         |
| Fort Logan                 | 94                            | 41              | 64.9              | 0.49                     |                         | Lyons                         | .....                         | .....           | .....             | 4.45                     | Palisade†                   | 98        | 54                            | 75.9              | 0.50  | Palisade                    |                         |
| Glenive†                   | 105                           | 45              | 74.0              | 0.22                     |                         | McCook                        | .....                         | .....           | .....             | 0.96                     | Palmetto                    | 96        | 41                            | 70.4              | 0.95  | Palmetto                    |                         |
| Glenwood                   | 92                            | 39              | 65.0              | 0.73                     |                         | Madison                       | 98                            | 46              | 73.4              | 3.85                     | Panaca                      | 105       | 46                            | 74.2              | 2.33  | Panaca                      |                         |
| Greatfalls†                | 91                            | 48              | 69.3              | 1.29                     |                         | Madrid                        | 98                            | 46              | 73.4              | 1.61                     | Reno†                       | 98        | 52                            | 73.4              | 0.10  | Reno                        |                         |
| Kalispell                  | 96                            | 40              | 70.5              | 1.10                     |                         | Madrid                        | 102 <sup>s</sup>              | 50 <sup>s</sup> | 77.2 <sup>s</sup> | 1.50                     | Reno State University       | 98        | 40                            | 69.4              | 0.16  | Reno State University       |                         |
| Kipp†                      | 92                            | 38              | 62.0              | 1.30                     |                         | Marquette                     | .....                         | .....           | .....             | 1.74                     | Ruby Valley                 | .....     | .....                         | .....             | 1.23  | Ruby Valley                 |                         |
| Livingston†                | 94                            | 44              | 68.8              | 1.28                     |                         | Merriman                      | .....                         | .....           | .....             | 2.00                     | St. Clair                   | 97        | 45                            | 73.8              | 0.00  | St. Clair                   |                         |
| Manhattan†                 | 93                            | 37              | 64.1              | 0.46                     |                         | Minden a                      | 102                           | 47              | 75.0              | 4.23                     | St. Thomas                  | 112       | 67                            | 89.2              | 0.00  | St. Thomas                  |                         |
| Martinsdale†               | 92                            | 38              | 66.4              | 0.24                     |                         | Minden b                      | .....                         | .....           | .....             | 3.95                     | San Antonio                 | 103       | 42                            | 77.0              | 3.15  | San Antonio                 |                         |
| Marysville†                | 99                            | 40              | 64.4              | 0.97                     |                         | Monroe                        | .....                         | .....           | .....             | 2.85                     | Silverpeak                  | 105       | 55                            | 79.8              | 0.40  | Silverpeak                  |                         |
| Missoula                   | .....                         | 42              | .....             | 0.29                     |                         | Nebraska City b               | .....                         | .....           | .....             | 0.82                     | Sodaville                   | 105       | 53                            | 80.0              | 0.14  | Sodaville                   |                         |
| Parrot                     | 95                            | 43              | 67.8              | 0.42                     |                         | Nebraska City c               | 104                           | 49              | 77.1              | 0.84                     | Spring Valley               | 104       | 50                            | 75.4              | 0.07  | Spring Valley               |                         |
| Poplar                     | 100                           | 45              | 70.7              | 0.09                     |                         | Nemaha <sup>*1</sup>          | 104                           | 54              | 78.7              | 0.53                     | Tecoma <sup>*1</sup>        | 111       | 55                            | 74.6              | 0.00  | Tecoma <sup>*1</sup>        |                         |
| Radersburg                 | 40                            | .....           | .....             | 0.50                     |                         | Nesbit                        | 98                            | 45              | 71.4              | 3.26                     | Toano <sup>*1</sup>         | 98        | 50                            | 70.9              | 0.30  | Toano <sup>*1</sup>         |                         |
| St. Pauls†                 | 93                            | 40              | 69.0              | 0.81                     |                         | Norfolk b                     | 98                            | 46              | 71.6              | 2.01                     | Tuscarora <sup>*1</sup>     | 92        | .....                         | .....             | 0.07  | Tuscarora <sup>*1</sup>     |                         |
| Troy                       | 100                           | 39              | 67.6              | 1.06                     |                         | Norman                        | .....                         | .....           | .....             | 3.87                     | Tybo                        | 100       | .....                         | .....             | 0.75  | Tybo                        |                         |
| Utica                      | 95                            | 41              | 67.3              | 0.67                     |                         | North Loup                    | 99                            | 45              | 74.3              | 1.97                     | Verdi <sup>*1</sup>         | 108       | 48                            | 73.0              | 0.10  | Verdi <sup>*1</sup>         |                         |
| Wibaux                     | 95°                           | 42              | 67.3 <sup>s</sup> | 0.25                     |                         | Oakdale†                      | 100                           | 46              | 72.8              | 2.92                     | Wadsworth <sup>*1</sup>     | 104       | 50                            | 80.0              | 0.07  | Wadsworth <sup>*1</sup>     |                         |
| Yale                       | 95                            | 40              | 66.8              | 0.56                     |                         | Odell <sup>*5</sup>           | 99                            | 60              | 77.8              | 1.50                     | Wells                       | 98        | 32                            | 69.6              | 0.48  | Wells                       |                         |
| <b>Nebraska.</b>           |                               |                 |                   |                          |                         | O'Neill†                      | 100                           | 47              | 70.3              | 2.33                     | <b>New Hampshire.</b>       |           |                               |                   |       | <b>New Hampshire.</b>       |                         |
| Agree <sup>*</sup>         | 99                            | 52              | 72.1              | 2.72                     |                         | Ord                           | 102                           | 44              | 73.6              | 2.04                     | Alstead <sup>*6</sup>       | 84        | 44                            | 69.3              | 7.40  | Alstead <sup>*6</sup>       |                         |
| Albion                     | 97                            | 46              | 71.0              | 1.47                     |                         | Ough†                         | .....                         | .....           | .....             | 1.92                     | Berlin Mills                | 87        | 36                            | 66.8              | 4.25  | Berlin Mills                |                         |
| Alliance                   | .....                         | .....           | .....             | 0.20                     |                         | Palmer b                      | .....                         | .....           | .....             | 3.65                     | Bethlehem                   | 88        | 41                            | 66.8              | 7.13  | Bethlehem                   |                         |
| Alma <sup>*</sup>          | 100                           | 52              | 76.6              | 2.34                     |                         | Ravenna a                     | 105                           | 46              | 75.0              | 1.72                     | Brookline <sup>*1</sup>     | 94        | 50                            | 71.4              | 5.09  | Brookline <sup>*1</sup>     |                         |
| Ansley†                    | 103                           | 44              | 73.4              | 2.12                     |                         | Redcloud a                    | .....                         | .....           | .....             | 0.13                     | Clairemont                  | 90        | 40                            | 69.0 <sup>s</sup> | 4.13  | Clairemont                  |                         |
| Arapaho <sup>*1</sup>      | 100                           | 52              | 75.4              | 3.17                     |                         | Redcloud b <sup>*1</sup>      | 104                           | 60              | 78.2              | 0.28                     | Concord                     | 92        | 39                            | 69.4              | 4.74  | Concord                     |                         |
| Arborville <sup>*1</sup>   | 108                           | 50              | 76.4              | 1.99                     |                         | Republican <sup>*1</sup>      | 106                           | 56              | 77.2              | 1.39                     | Durham                      | 92        | 44                            | 69.8              | 5.92  | Durham                      |                         |
| Ashland <sup>a†</sup>      | 108                           | 44              | 76.4              | 2.95                     |                         | Rulo <sup>*1</sup>            | 104                           | 58              | 76.6              | 0.40                     | Hanover                     | 90        | 41                            | 68.6              | 3.94  | Hanover                     |                         |
| Ashland <sup>b†</sup>      | 107                           | 57              | 78.4              | 2.77                     |                         | St. Libory                    | 101                           | 50              | 75.4              | 1.47                     | Keene                       | 90        | 39                            | 68.8              | 4.87  | Keene                       |                         |
| Ashton                     | .....                         | .....           | .....             | 1.76                     |                         | St. Paul                      | 101                           | 52              | 76.2              | 3.80                     | Lancaster                   | .....     | .....                         | .....             | 4.58  | Lancaster                   |                         |
| Auburn <sup>a†</sup>       | 104                           | 50              | 77.6              | 1.55                     |                         | Salem <sup>*1</sup>           | 98                            | 52              | 78.0              | 1.37                     | Littleton                   | 84        | 42                            | 65.8              | 7.90  | Littleton                   |                         |
| Aurora                     | .....                         | .....           | .....             | 1.84                     |                         | Santee Agency <sup>t</sup>    | 104                           | 50              | 74.0              | 2.47                     | Nashua                      | 94        | 42                            | 71.2              | 6.56  | Nashua                      |                         |
| Bartley                    | .....                         | .....           | .....             | 3.40                     |                         | Sargent                       | .....                         | .....           | .....             | 3.50                     | Newton                      | 91        | 41                            | 69.6              | 6.26  | Newton                      |                         |
| Bassett                    | .....                         | .....           | .....             | 1.49                     |                         | Schuyler                      | .....                         | .....           | .....             | 3.72                     | North Conway                | 93        | 43                            | 68.7              | 0.70  | North Conway                |                         |
| Beatrice <sup>t</sup>      | 101                           | .....           | .....             | 2.33                     |                         | Seneca <sup>*1</sup>          | 98                            | 48              | 70.1              | 2.55                     | Peterboro                   | 90        | 38                            | 68.4              | 6.05  | Peterboro                   |                         |
| Beaver City <sup>t</sup>   | 105                           | 49              | 77.4              | 2.23                     |                         | Seward <sup>*1</sup>          | 98                            | 58              | 76.6              | 3.42                     | Plymouth                    | 95        | 38                            | 69.2              | 5.29  | Plymouth                    |                         |
| Bellevue                   | .....                         | .....           | .....             | 2.20                     |                         | Sprague                       | .....                         | .....           | .....             | 3.30                     | Sanbornton <sup>t</sup>     | 88        | 41                            | 67.3              | 3.91  | Sanbornton <sup>t</sup>     |                         |
| Benedict                   | .....                         | .....           | .....             | 0.96                     |                         | Springview                    | 98                            | 46              | 72.0              | 1.91                     | Stratford                   | 87        | 44                            | 67.2              | 5.53  | Stratford                   |                         |
| Henkelman                  | .....                         | .....           | .....             | 0.90                     |                         | Stanton                       | .....                         | .....           | .....             | 7.99                     | Warner                      | .....     | .....                         | .....             | 7.99  | Warner                      |                         |
| Blair                      | 101                           | 52              | 73.4              | 2.22                     |                         | State Farm                    | 102 <sup>s</sup>              | 43              | 75.2 <sup>s</sup> | 2.82                     | <b>New Jersey.</b>          |           |                               |                   |       | <b>New Jersey.</b>          |                         |
| Bluehill                   | .....                         | .....           | .....             | 2.14                     |                         | Stockham                      | .....                         | .....           | .....             | 1.31                     | Ashbury Park                | 95        | 61                            | 75.2              | 6.41  | Ashbury Park                |                         |
| Brokenbow                  | .....                         | .....           | .....             | 3.55                     |                         | Strang <sup>*1</sup>          | 96                            | 55              | 76.4              | 5.25                     | Barneget                    | 92        | 63                            | 75.8              | 2.70  | Barneget                    |                         |
| Burchard                   | .....                         | .....           | .....             | 1.55                     |                         | Stratton                      | .....                         | .....           | .....             | 1.55                     | Bayonne                     | 96        | 56                            | 76.6              | 3.57  | Bayonne                     |                         |
| Burwell                    | .....                         | .....           | .....             | 4.68                     |                         | Syracuse                      | .....                         | .....           | .....             | 1.65                     | Belvidere                   | 94        | 48                            | 73.4              | 8.40  | Belvidere                   |                         |
| Callaway <sup>t</sup>      | 98                            | 51              | 75.4              | 6.85                     |                         | Tablerock                     | 102                           | 49              | 79.8              | 1.65                     | Bergen Point                | 93        | 59                            | 75.2              | 3.94  | Bergen Point                |                         |
| Camp Clarke                | 109                           | 44              | 75.8              | 1.01                     |                         | Tecumseh b†                   | 105                           | 47              | 78.2              | 1.55                     | Beverly <sup>t</sup>        | 95        | 53                            | 76.4              | 5.82  | Beverly <sup>t</sup>        |                         |
| Central City <sup>*6</sup> | .....                         | .....           | .....             | 2.30                     |                         | Tekamah                       | 102                           | 46              | 73.1              | 4.60                     | Billingsport <sup>*1</sup>  | 91        | 64                            | 75.4              | 4.81  | Billingsport <sup>*1</sup>  |                         |
| Cody                       | .....                         | .....           | .....             | 0.80                     |                         | Thedford <sup>*1</sup>        | 96                            | 54              | 70.7              | 3.30                     | Boonton                     | 93        | 49                            | 73.6              | 4.99  | Boonton                     |                         |
| Columbus†                  | 96                            | 46              | 72.4              | 3.86                     |                         | Turlington <sup>t</sup>       | 104                           | 53              | 78.2              | 1.77                     | Bridgeton                   | 95        | 55                            | 78.1              | 4.18  | Bridgeton                   |                         |
| Creighton†                 | 98                            | 44              | 71.2              | 3.40                     |                         | Valentine <sup>t</sup>        | 100                           | 50              | 72.0              | 3.62                     | Camden                      | 89        | 55                            | 74.4              | 9.28  | Camden                      |                         |
| Crete                      | 102                           | 46              | 76.0              | 2.76                     |                         | Valparaiso                    | .....                         | .....           | .....             | 1.54                     | Cape May C. H. <sup>t</sup> | 91        | 56                            | 75.8              | 4.32  | Cape May C. H. <sup>t</sup> |                         |
| Culbertson                 | .....                         | .....           | .....             | 1.84                     |                         | Wakefield                     | 100                           | 48              | 72.5              | 1.67                     | Charlotteburg               | 90        | 42                            | 69.8              | 5.91  | Charlotteburg               |                         |
| Curtis <sup>a</sup>        | 102                           | 51              | 75.3              | 1.67                     |                         | Wauneta                       | .....                         | .....           | .....             | 1.14                     | Clayton                     | 96        | 52                            | 75.9              | 4.11  | Clayton                     |                         |
| David City                 | 97                            | 49              | 74.2              | 2.80                     |                         | Weeping Water <sup>*1</sup>   | 99                            | 43              | 73.4              | 1.91                     | College Farm <sup>t</sup>   | 93        | 55                            | 74.9              | 6.44  | College Farm <sup>t</sup>   |                         |
| Dawson                     | 103                           | 48              | 78.2              | 0.93                     |                         | Westpoint <sup>t</sup>        | 99                            | 49              | 74.0              | 3.88                     | Deckertown                  | 89        | 46                            | 71.6              | 7.53  | Deckertown                  |                         |
| Divide                     | .....                         | .....           | .....             | 2.70                     |                         | Whitman                       | .....                         | .....           | .....             | 0.05                     | Dover                       | 92        | 46                            | 72.3              | 5.17  | Dover                       |                         |
| Eden                       | .....                         | .....           | .....             | 2.16                     |                         | Wilber <sup>*1</sup>          | 96                            | 58              | 76.2              | 4.01                     | Egg Harbor City             | 94        | 56                            | 75.4              | 4.97  | Egg Harbor City             |                         |
| Edgar <sup>*1</sup>        | 104                           | 54              | 71.7              | 2.91                     |                         | Willard                       | .....                         | .....           | .....             | 3.46                     | Elizabeth <sup>t</sup>      | 98        | 55                            | 75.5              | 3.80  | Elizabeth <sup>t</sup>      |                         |
| Ericson <sup>*1</sup>      | 100                           | 57              | 77.2              | 2.68                     |                         | Wilsonville <sup>t</sup>      | 100                           | 50              | 76.5              | 2.61                     | Englewood                   | 94        | 56                            | 75.4              | 5.88  | Englewood                   |                         |
| Ewing <sup>t</sup>         | .....                         | .....           | .....             | 5.88                     |                         | Wisner                        | .....                         | .....           | .....             | 1.70                     | Flemington                  | 95        | 51                            | 74.4              | 5.61  | Flemington                  |                         |
| Fairbury <sup>t</sup>      | 106                           | 47              | 77.1              | 1.46                     |                         | Wymore <sup>*1</sup>          | 101                           | 53              | 75.2              | 2.07                     | Franklin Furnace            | 91        | 45                            | 72.0              | 6.16  | Franklin Furnace            |                         |
| Fairfield                  | 102                           | .....           | .....             | 3.12                     |                         | York <sup>*1</sup>            | 104                           | 54              | 77.2              | 1.39                     | Freehold                    | 91        | 56                            | 73.6              | 6.82  | Freehold                    |                         |
| Fairmont <sup>t</sup>      | 100                           | 45              | 74.6              | 4.20                     |                         | <b>Nevada.</b>                | .....                         | .....           | .....             | 1.70                     | Friesburg                   | 95        | 54                            | 76.4              | 6.40  | Friesburg                   |                         |
| Fort Robinson              | 101                           | 46              | 72.8              | 0.05                     |                         | Austin                        | 92                            | 44              | 78.4              | 0.00                     | Gillette                    | 91        | 51                            | 73.3              | 4.30  | Gillette                    |                         |
| Franklin                   | .....                         | .....           | .....             | 0.30                     |                         | Battle Mountain <sup>*1</sup> | 104                           | 53              | 78.4              | 0.00                     | Hammonton                   | .....     | .....                         | .....             | 4.66  | Hammonton                   |                         |
| Fremont <sup>t</sup>       | 98                            | 48              | 72.8              | 2.06                     |                         | Beowawe <sup>*1</sup>         | 101                           | 60              | 77.6              | T.                       | Hanover                     | 91        | 49                            | 72.4              | 5.08  | Hanover                     |                         |
| Geneva <sup>t</sup>        | 99                            | 45              | 74.7              | 4.97                     |                         | Blaine                        | 93                            | 29              | 63.4              | 0.11                     | Hightstown                  | 92        | 58                            | 75.2              | 6.82  | Hightstown                  |                         |
| Genoa                      | 100                           | 50              | 75.4              | 3.98                     |                         | Bunkerville                   | .....                         | .....           | .....             | 0.80                     | Imlaytown                   | 98        | 55                            | 76.4              | 6.88  | Imlaytown                   |                         |
| Gering                     | .....                         | .....           | .....             | 0.60                     |                         | Candelaria                    | 99                            | 50              | 76.0              | 0.98                     | Junction                    | 97        | 53                            | 77.0              | 4.65  | Junction                    |                         |
| Gordon                     | .....                         | .....           | .....             | 0.60                     |                         | Carlin <sup>t</sup>           | 100                           | 44              | 69.6              | 0.50                     | Lambertville                | 93        | 54                            | 75.6              | 5.04  | Lambertville                |                         |
| Gothenburg                 | 100 <sup>m</sup>              | 46 <sup>m</sup> | 72.8 <sup>m</sup> | 2.52                     |                         | Carson City                   | 99                            | 37              | 68.9</td          |                          |                             |           |                               |                   |       |                             |                         |

TABLE II.—*Meteorological record of voluntary and other cooperating observers—Continued.*

| Stations.                   | Temperature.<br>(Fahrenheit.) |          |       | Precipita-<br>tion.      |                         | Stations.              | Temperature.<br>(Fahrenheit.) |          |       | Precipita-<br>tion.      |                         | Stations.        | Temperature.<br>(Fahrenheit.) |          |       | Precipita-<br>tion.      |                         |
|-----------------------------|-------------------------------|----------|-------|--------------------------|-------------------------|------------------------|-------------------------------|----------|-------|--------------------------|-------------------------|------------------|-------------------------------|----------|-------|--------------------------|-------------------------|
|                             | Maximum.                      | Minimum. | Mean. | Rain and melted<br>snow. | Total depth of<br>snow. |                        | Maximum.                      | Minimum. | Mean. | Rain and melted<br>snow. | Total depth of<br>snow. |                  | Maximum.                      | Minimum. | Mean. | Rain and melted<br>snow. | Total depth of<br>snow. |
| <i>New Mexico—Cont'd.</i>   |                               |          |       |                          |                         |                        |                               |          |       |                          |                         |                  |                               |          |       |                          |                         |
| Albuquerque†                | 94                            | 58       | 75.6  | 0.60                     | In. 8.                  | Nunda                  | 93                            | 42       | 70.3  | 7.29                     | In. 8.                  | Devils Lake      | 90                            | 38       | 64.8  | 1.84                     |                         |
| Alma                        | 92                            | 54       | 72.7  | 3.54                     |                         | Ogdensburg             | 93                            | 47       | 68.7  | 4.06                     |                         | Dickinson        | 104                           | 45       | 69.8  | 0.77                     |                         |
| Aztec†                      | 93                            | 58       | 74.0  | 0.89                     |                         | Oneonta                | 93                            | 40       | 69.0  | 13.05                    |                         | Dunseith         | 94                            | 36       | 65.8  | 1.50                     |                         |
| Bernalillo†                 | 98                            | 60       | 76.9  | 1.38                     |                         | Oxford                 | 93                            | 39       | 69.5  | 9.82                     |                         | Ellendale        | 98                            | 45       | 66.8  | 1.49                     |                         |
| Bluewater                   | 94                            | 37       | 66.0  | 1.00                     |                         | Palermo                | 91                            | 43       | 69.6  | 2.93                     |                         | Fargo†           | 91                            | 35       | 65.2  | 2.84                     |                         |
| Buckmans                    | 82                            | 85       | 59.2  | 1.11                     |                         | Penn Yan               | 94                            | 45       | 71.4  | 4.16                     |                         | Forman†          | 94                            | 36       | 66.4  | 2.37                     |                         |
| Clayton                     | 96                            | 57       | 75.0  | 2.30                     |                         | Perry City             | 90                            | 37       | 68.8  | 4.68                     |                         | Fort Berthold    | 102                           | 38       | 68.4  | 0.04                     |                         |
| Deming†                     | 100                           | 70       | 79.0  | 1.73                     |                         | Phenix                 |                               |          |       | 5.26                     |                         | Fort Yates†      | 98                            |          |       | 1.50                     |                         |
| East Las Vegas†             | 85                            | 50       | 66.4  | 2.97                     |                         | Pine City              |                               |          |       | 6.05                     |                         | Fullerton        | 96                            | 32       | 66.2  | 2.45                     |                         |
| Eddy                        | 96                            | 57       | 77.4  | 1.61                     |                         | Plattsburg Barracks†   | 85                            | 47       | 69.2  | 5.82                     |                         | Gallatin†        | 92                            | 29       | 63.4  | 1.41                     |                         |
| Engle†                      | 93                            | 57       | 74.8  | 4.40                     |                         | Port Jervis            | 92                            | 47       | 72.0  | 7.08                     |                         | Glenullin        | 97                            | 40       | 66.2  | T.                       |                         |
| Espanola                    | 94                            | 53       | 72.2  | 1.32                     |                         | Poughkeepsie           | 90                            | 45       | 71.4  | 8.85                     |                         | Goetz            | 94                            | 35       | 65.9  | 0.37                     |                         |
| Folsom                      | 91                            | 48       | 69.4  | 0.96                     |                         | Primrose               | 93                            | 50       | 72.4  | 5.82                     |                         | Hamilton         | 86                            | 36       | 65.5  | 2.02                     |                         |
| Fort Bayard                 | 90                            | 51       | 71.6  | 2.45                     |                         | Widzeway               | 88                            | 47       | 70.5  | 4.88                     |                         | Jamestown†       | 94                            | 35       | 64.9  | 1.60                     |                         |
| Fort Union                  | 87                            | 45       | 64.6  | 3.75                     |                         | Rome                   | 88                            | 43       | 68.4  | 10.98                    |                         | Kelso            | 92                            | 39       | 66.2  | 2.18                     |                         |
| Fort Wingate                | 96                            | 51       | 71.6  | 2.23                     |                         | Romulus                | 90                            | 46       | 71.0  | 4.97                     |                         | Langdon          | 86                            | 32       | 61.7  | 1.95                     |                         |
| Galisteo                    | 96                            | 52       | 71.4  | 2.23                     |                         | Rose                   |                               |          |       | 7.58                     |                         | Laramore†        | 90                            | 36       | 63.4  | 1.73                     |                         |
| Gallinas Spring†            | 94                            | 55       | 74.8  | 0.80                     |                         | St. Johnsville         | 89                            | 42       | 69.7  | 6.11                     |                         | Lisbon           | 94                            | 29       | 66.1  | 4.56                     |                         |
| Gila                        | 99                            | 59       | 78.6  | 2.48                     |                         | Saranac Lake           | 84                            | 37       | 66.2  | 4.79                     |                         | McKinney         | 94                            | 32       | 63.6  | 2.10                     |                         |
| Laluz                       | 90                            | 56       | 74.2  | 4.77                     |                         | Saratoga Springs       | 88                            | 44       | 70.4  | 6.39                     |                         | Medora†          | 104                           | 42       | 70.2  | T.                       |                         |
| Las Vegas Hot Springs       | 89                            | 48       | 67.7  | 1.81                     |                         | Scottsville            |                               |          |       | 4.16                     |                         | Milton†          | 85                            |          |       | 1.70                     |                         |
| Lordsburg†                  | 98                            | 69       | 79.8  | 0.17                     |                         | Setauket†              | 80                            | 58       | 72.9  | 6.56                     |                         | Minnewaukon      | 90                            | 37       | 63.9  | 1.90                     |                         |
| Lower Penasco               | 94                            | 52       | 70.6  | 4.00                     |                         | Sherwood               |                               |          |       | 6.18                     |                         | Minot            | 90                            | 45       | 68.4  | 0.05                     |                         |
| Missilla Park               | 97                            | 53       | 75.4  | 2.43                     |                         | Skaneateles            |                               |          |       | 6.17                     |                         | Minto†           | 93                            | 36       | 64.0  | 2.42                     |                         |
| Monero                      | 90                            | 37       | 64.4  | 0.85                     |                         | South Canisteo         | 90                            | 39       | 67.0  | 4.45                     |                         | Napoleon†        | 96                            | 38       | 66.8  | 1.84                     |                         |
| Puerto de Luna              | 96                            | 54       | 75.4  | ...                      |                         | South Kortright†       | 88                            | 35       | 67.4  | 8.21                     |                         | New England City | 101                           | 40       | 69.4  | 0.50                     |                         |
| Raton                       | 98                            | 44       | 68.4  | 3.00                     |                         | Straits Corners        | 92                            | 43       | 69.4  | 7.15                     |                         | Oakdale†         | 92                            | 46       | 67.2  | 1.35                     |                         |
| Rincon†                     | 96                            | 59       | 75.9  | 2.63                     |                         | Ticonderoga            | 88                            | 45       | 71.0  | 4.40                     |                         | Pembina          | 89                            | 38       | 63.8  | 2.15                     |                         |
| Roswell†                    | 98                            | 54       | 75.0  | 2.99                     |                         | Wappingers Falls       | 90                            | 48       | 72.7  | 7.75                     |                         | Portal           | 92                            | 40       | 64.0  | 0.74                     |                         |
| White Oaks†                 | 98                            | 50       | 68.9  | 3.54                     |                         | Watertown              | 88                            | 42       | 69.8  | 4.52                     |                         | Power†           | 92                            | 34       | 63.6  |                          |                         |
| Winsors Ranch               | 80                            | 34       | 57.8  | 3.27                     |                         | Waverly†               | 94                            | 41       | 71.4  | 5.82                     |                         | Sheyenne         | 95                            | 35       | 65.4  | 3.80                     |                         |
| <i>New York.</i>            |                               |          |       |                          |                         | Wedgewood              | 94                            | 44       | 70.2  | 4.73                     |                         | Steele           | 90                            | 38       | 65.8  | 1.65                     |                         |
| Adams                       |                               |          |       |                          |                         | Westfield              | 86                            | 50       | 70.0  | 2.46                     |                         | Townert†         | 86                            | 40       | 67.5  | 1.35                     |                         |
| Addison                     | 91                            | 42       | 69.9  | 2.92                     |                         | Westpoint†             | 92                            | 52       | 72.4  | 8.38                     |                         | Valley City†     | 91                            | 35       | 65.4  | 1.56                     |                         |
| Alden                       | 90                            | 40       | 69.1  | 2.88                     |                         | Willets Point          | 94                            | 58       | 74.4  | 4.94                     |                         | Wahpeton†        | 96                            | 38       | 67.5  | 4.05                     |                         |
| Alfred                      | 88                            | 52       | 71.8  | 6.21                     |                         | <i>North Carolina.</i> |                               |          |       |                          |                         | Washburn†        | 102                           | 39       | 67.0  | 1.45                     |                         |
| Appleton                    | 92                            | 43       | 70.6  | 2.10                     |                         | Abshers                | 92                            | 57       | 75.9  | 10.01                    |                         | Willow City      | 92                            | 34       | 64.6  | 0.20                     |                         |
| Arcade                      | 87                            | 41       | 67.6  | 6.20                     |                         | Beaufort†              | 92                            | 67       | 79.6  | 10.54                    |                         | Woodbridge†      | 87                            | 32       | 61.4  | 1.52                     |                         |
| Atlanta                     |                               |          |       |                          |                         | Biltmore†              | 89                            | 60       | 73.6  | 6.90                     |                         | <i>Ohio.</i>     |                               |          |       |                          |                         |
| Auburn                      | 90                            | 48       | 71.1  | 6.61                     |                         | Chapel Hill            | 96                            | 65       | 78.7  | 14.48                    |                         | Akron            | 93                            | 47       | 72.1  | 5.65                     |                         |
| Baldwinsville               | 91                            | 44       | 70.6  | 5.98                     |                         | Experimental Farm      | 92                            | 69       | 80.5  | 6.81                     |                         | Annapolis        | 95                            | 50       | 73.5  | 3.71                     |                         |
| Bedford                     | 89                            | 47       | 70.8  | 7.91                     |                         | Fairbluff†             | 96                            | 64       | 78.2  | 7.46                     |                         | Ashland          | 90                            | 50       | 70.8  | 4.74                     |                         |
| Big Sandy* <sup>10</sup>    | 86                            | 50       | 71.3  | ...                      |                         | Fayetteville†          | 86                            | 57       | 71.7  | 11.35                    |                         | Atwater          | 95                            | 48       | 72.4  | 5.02                     |                         |
| Bolivar                     | 88                            | 37       | 66.3  | 6.28                     |                         | Flatrock               | 96                            | 66       | 80.6  | 9.32                     |                         | Bangorville      | 92                            | 57       | 72.9  | 4.19                     |                         |
| Boyd's Corners              | 86                            | 41       | 67.6  | 7.66                     |                         | Goldsboro              | 92                            | 65       | 77.2  | 3.30                     |                         | Bellefontaine    | 40                            |          |       | 3.89                     |                         |
| Brentwood                   | 94                            | 50       | 73.7  | 5.50                     |                         | Henderson†             | 93                            | 65       | 78.0  | 7.74                     |                         | Benton Ridge     | 93                            | 47       | 72.3  | 4.73                     |                         |
| Canajoharie                 | 88                            | 52       | 71.0  | 6.16                     |                         | Hendersonville         | 89                            | 60       | 72.7  | 8.61                     |                         | Bethany          | 97                            | 58       | 76.2  | 5.37                     |                         |
| Canton                      | 92                            | 41       | 68.0  | 6.00                     |                         | Horse Cove             | 86                            | 57       | 71.8  | 16.93                    |                         | Bigprairie       | 93                            | 47       | 72.4  | 4.38                     |                         |
| Carmel                      | 92                            | 53       | 73.1  | 12.87                    |                         | Lenoir† <sup>11</sup>  | 85                            | 67       | 74.5  | 5.26                     |                         | Binola           | 91                            | 52       | 74.0  | 5.92                     |                         |
| Carvers Falls               | 87                            | 43       | 69.0  | 5.95                     |                         | Linville†              | 79                            | 52       | 66.0  | 8.48                     |                         | Bloomingburg     | 96                            | 43       | 72.0  | 2.63                     |                         |
| Catskill                    | 89                            | 48       | 71.8  | 6.50                     |                         | Littleton              | 94                            | 65       | 78.4  | 4.21                     |                         | Bowling Green    | 98                            | 50       | 71.4  | 4.50                     |                         |
| Cedarhill*                  | 91                            | 46       | 72.0  | 6.51                     |                         | Louisburg†             | 94                            | 65       | 79.2  | 8.08                     |                         | Bucyrus          | 91                            | 48       | 71.6  | 5.17                     |                         |
| Charlotte* <sup>10</sup>    | 92                            | 50       | 71.8  | ...                      |                         | Lumbertont†            | 97                            | 66       | 80.3  | 7.98                     |                         | Cambridge        | 94                            | 58       | 76.6  | 4.59                     |                         |
| Chemango Forks              |                               |          |       |                          |                         | Mount airy             | 90                            | 59       | 75.0  | 7.17                     |                         | Camp Dennison    | 94                            | 58       | 76.6  | 4.59                     |                         |
| Cherry Creek                |                               |          |       |                          |                         | Mount Pleasant         | 91                            | 67       | 77.6  | 8.01                     |                         | Canal Dover      | 93                            | 53       | 73.0  | 3.79                     |                         |
| Cooperstown†                | 87                            | 44       | 68.8  | 9.75                     |                         | Murphy†                |                               |          |       | 9.73                     |                         | Canton†          | 92                            | 50       | 72.2  | 6.07                     |                         |
| Cortland                    | 89                            | 41       | 68.0  | 9.44                     |                         | Monroe†                | 97                            | 62       | 78.6  | 6.94                     |                         | Carrollton       | 92                            | 50       | 72.2  | 6.89                     |                         |
| Dekab Junction              |                               |          |       |                          |                         | Morganton              | 92                            | 65       | 77.2  | 7.30                     |                         | Cedarville       |                               |          |       | 4.08                     |                         |
| Dryden                      | 90                            | 39       | 68.8  | 5.47                     |                         | Mount airy             | 90                            | 59       | 75.0  | 7.17                     |                         | Celine           | 95                            | 46       | 72.7  | 2.35                     |                         |
| Elizabethtown               | 89                            | 38       | 66.5  | 3.25                     |                         | Mount Pleasant         | 91                            | 67       | 77.6  | 8.01                     |                         | Chillicothe      | 93                            | 56       | 74.9  | 4.36                     |                         |
| Elmira                      | 93                            | 50       | 73.0  | 4.70                     |                         | Murphy†                |                               |          |       | 9.73                     |                         | Circleville      | 92                            | 54       | 75.0  | 4.45                     |                         |
| Fayetteville                |                               |          |       |                          |                         | Monroe†                | 97                            | 62       | 78.6  | 6.94                     |                         | Clarksville      | 93                            | 56       | 74.8  | 9.06                     |                         |
| Fleming                     | 90                            | 48       | 71.4  | 4.65                     |                         | Monroe†                | 93                            | 63       | 77.6  | 11.65                    |                         | Cleveland a.     | 88                            | 51       | 72.0  | 2.14                     |                         |
| Franklinville               | 89                            | 38       | 67.6  | 7.99                     |                         | Morganston             | 92                            | 65       | 77.2  | 7.30                     |                         | Cleveland b.     | 93                            | 53       | 72.6  | 2.42                     |                         |
| Garrattsville               | 88                            | 38       | 67.7  | 10.14                    |                         | Mount airy             | 90                            | 59       | 75.0  | 7.17                     |                         | Clifton          | 95                            | 50       | 74.2  | 4.35                     |                         |
| Glen's Falls                | 87                            | 52       | 70.1  | 7.02                     |                         | Mount Pleasant         | 91                            | 67       | 77.6  | 8.46                     |                         | Coalton          | 94                            | 54       | 75.2  | 5.76                     |                         |
| Groversville                | 87                            | 40       | 68.9  | 6.90                     |                         | Murphy†                |                               |          |       | 8.46                     |                         | Dayton a.        | 99                            | 52       | 75.2  | 2.92                     |                         |
| Greenwich                   | 88                            | 45       | 69.8  | 6.81                     |                         | Monroe†                | 93                            | 64       | 77.8  | 9.25                     |                         | Dayton b†        |                               |          |       | 3.69                     |                         |
| Haskinsville                |                               |          |       |                          |                         | Rockingham†            | 95                            | 66       | 79.4  | 7.69                     |                         | Defiance         | 93                            | 48       | 71.9  | 2.01                     |                         |
| Hemlock Lake                | 88                            | 45       | 70.6  | 4.86                     |                         | Roxborof†              | 93                            | 59       | 75.4  | 4.53                     |                         | Delaware         | 94                            | 50       | 75.8  | 2.84                     |                         |
| Honeymead Brook             | 89                            | 47       | 70.2  | 7.35                     |                         | Salem†                 | 93                            | 64       | 77.8  | 5.16                     |                         | Demos            | 90                            | 51       | 72.9  | 8.81                     |                         |
| Humphrey†                   | 85                            | 45       | 67.2  | 9.21                     |                         | Salisbury†             | 95                            | 64       | 78.6  | 7.07                     |                         | Elyria           | 94                            | 47       | 73.8  | 5.64                     |                         |
| Ithaca                      | 89                            | 42       | 70.9  | 4.42                     |                         | Saxont†                | 96                            | 62       | 78.1  | 4.64                     |                         | Findlay          | 98                            | 40       | 72.4  | 5.03                     |                         |
| Jamesstown                  | 87                            | 46       | 68.4  | 7.21                     |                         | Selma                  | 97                            | 60       | 79.6  | 7.79                     |                         | Frankfort        | 90                            | 52       | 73.6  | 4.58                     |                         |
| Keene Valley* <sup>11</sup> | 80                            | 40       | 65.8  | 4.25                     |                         | Settle                 | 94                            | 63       | 76.4  | 6.45                     |                         | Garrettsville†   | 92                            | 44       | 70.1  | 5.42                     |                         |
| Kings Station               |                               |          |       |                          |                         | Sloan†                 | 98                            | 65       | 78.8  | 7.52                     |                         | Granville        | 94                            | 47       | 74.8  | 4.73                     |                         |
| Lake George                 | 86                            | 46       | 69.2  | 7.37                     |                         | Spokane Mount†         | 93                            | 62       | 76.6  | 8.17                     |                         | Hanging Rock     | 96                            | 57       | 77.3  | 6.48                     |                         |
| Liberty                     | 86                            | 47       | 67.1  | 8.05                     |                         | Southern Pines a†      | 97                            | 59       | 79.2  | 7.44                     |                         | Hedges           | 95                            | 43       | 70.8  | 1.80                     |                         |
| Little Falls                | 86                            | 49       | 68.9  | 5.24                     |                         | Southern Pines b†      |                               |          |       | 7.39                     |                         | Hillhouse        | 91                            | 46       | 69.9  | 5.74                     |                         |
| Lockport                    | 90                            | 47       | 70.0  | 4.09                     |                         | Southport†             | 90                            | 67       | 80.3  | 7.67                     | </td                    |                  |                               |          |       |                          |                         |

TABLE II.—*Meteorological record of voluntary and other cooperating observers*—Continued.

| Stations.                             | Temperature.<br>(Fahrenheit.) |          |       | Precipita-<br>tion.      |                         | Stations.                            | Temperature.<br>(Fahrenheit.) |          |       | Precipita-<br>tion.       |                         | Stations.                          | Temperature.<br>(Fahrenheit.) |          |       | Precipita-<br>tion.      |                         |
|---------------------------------------|-------------------------------|----------|-------|--------------------------|-------------------------|--------------------------------------|-------------------------------|----------|-------|---------------------------|-------------------------|------------------------------------|-------------------------------|----------|-------|--------------------------|-------------------------|
|                                       | Maximum.                      | Minimum. | Mean. | Rain and melted<br>snow. | Total depth of<br>snow. |                                      | Maximum.                      | Minimum. | Mean. | Rain and melted<br>snow.  | Total depth of<br>snow. |                                    | Maximum.                      | Minimum. | Mean. | Rain and melted<br>snow. | Total depth of<br>snow. |
| <i>Ohio—Cont'd.</i>                   | °                             | °        | °     | In.                      | In.                     | <i>Oregon—Cont'd.</i>                | °                             | °        | °     | In.                       | In.                     | <i>Pennsylvania—Cont'd.</i>        | °                             | °        | °     | In.                      | In.                     |
| Logan .....                           | 98                            | 50       | 76.3  | 4.51                     |                         | Aurora (near) .....                  | 99                            | 42       | 66.4  | T.                        |                         | Freepo <sup>r</sup> t .....        | °                             | °        | °     | Ins.                     | Ins.                    |
| Lordstown .....                       | 92                            | 47       | 71.4  | 4.95                     |                         | Bandon .....                         | 71                            | 51       | 59.4  | 0.67                      |                         | Girardville .....                  |                               |          |       | 6.81                     | 6.81                    |
| McArthur .....                        | 96                            | 52       | 74.6  | 4.19                     |                         | Bay City .....                       | 85                            | 45       | 61.3  | 0.87                      |                         | Grampian .....                     |                               |          |       | 11.32                    | 11.32                   |
| McConnellsville <sup>t</sup> .....    | 94                            | 51       | 75.2  | 5.35                     |                         | Beulah .....                         | 105                           | 40       | 70.0  | T.                        |                         | Greensboro .....                   |                               |          |       | 4.12                     | 4.12                    |
| Mansfield <sup>t</sup> .....          |                               |          |       | 4.23                     |                         | Brownsville .....                    | 100                           | 54       | 69.6  | 0.40                      |                         | Greenville .....                   |                               |          |       | 6.71                     | 6.71                    |
| Marietta <sup>b</sup> .....           | 89                            | 56       | 74.6  | 5.31                     |                         | Burns .....                          | 102                           | 41       | 66.5  | T.                        |                         | Hamburg .....                      |                               |          |       | 5.42                     | 5.42                    |
| Marion .....                          | 94                            | 47       | 73.1  | 4.20                     |                         | Burns (near) .....                   | 101                           | 35       | 69.6  | T.                        |                         | Hawley .....                       |                               |          |       | 7.26                     | 7.26                    |
| Medina .....                          | 94                            | 46       | 73.5  | 5.96                     |                         | Cascade Locks .....                  | 96                            | 51       | 69.5  | 1.28                      |                         | Hews Island Dam .....              |                               |          |       | 4.67                     | 4.67                    |
| Milfordton .....                      | 94                            | 45       | 71.3  | 3.84                     |                         | Comstock <sup>*1</sup> .....         | 98                            | 49       | 65.2  | 0.43                      |                         | Hollidaysburg <sup>a</sup> .....   |                               |          |       | 4.31                     | 4.31                    |
| Milligan .....                        | 96                            | 52       | 75.7  | 4.33                     |                         | Coquille River .....                 | 98                            | 43       | 66.7  | 0.95                      |                         | Huntingdon <sup>a</sup> .....      |                               |          |       | 5.18                     | 5.18                    |
| Millport .....                        | 89                            | 51       | 70.8  | 7.55                     |                         | Corvallis .....                      | 98                            | 43       | 66.7  | 0.12                      |                         | Huntingdon <sup>b</sup> .....      |                               |          |       | 4.68                     | 4.68                    |
| Montpelier .....                      | 93                            | 45       | 71.2  | 1.38                     |                         | Dayville .....                       | 105                           | 44       | 70.4  | 0.14                      |                         | Irwin .....                        |                               |          |       | 5.47                     | 5.47                    |
| Napoleon .....                        | 94                            | 43       | 70.5  | 3.09                     |                         | Ella .....                           |                               |          |       | T.                        |                         | Johnstown .....                    |                               |          |       | 8.37                     | 8.37                    |
| Neapolis .....                        |                               |          |       | 2.24                     |                         | Fairview .....                       | 88                            | 48       | 65.3  | 0.91                      |                         | Keating .....                      |                               |          |       | 4.25                     | 4.25                    |
| New Alexandria .....                  | 87                            | 53       | 71.6  | 7.21                     |                         | Falls City .....                     | 94                            | 46       | 65.2  | 0.45                      |                         | Kennett Square .....               |                               |          |       | 6.94                     | 6.94                    |
| New Berlin .....                      | 93                            | 48       | 72.2  | 6.78                     |                         | Gardiner .....                       | 78                            | 50       | 62.1  | 0.92                      |                         | Lansdale .....                     |                               |          |       | 10.01                    | 10.01                   |
| New Bremen .....                      | 98                            | 51       | 74.0  | 2.29                     |                         | Glenora .....                        | 100                           | 45       | 66.4  | 0.57                      |                         | Lawrenceville .....                |                               |          |       | 4.79                     | 4.79                    |
| New Holland .....                     | 93                            | 52       | 75.0  | 4.66                     |                         | Government Camp .....                | 95                            | 35       | 59.8  | 0.80                      |                         | Lebanon .....                      |                               |          |       | 10.43                    | 10.43                   |
| New Moscow .....                      |                               |          |       | 3.73                     |                         | Grants Pass <sup>a</sup> .....       | 103                           | 42       | 72.0  | 0.05                      |                         | Leroy .....                        |                               |          |       | 6.95                     | 6.95                    |
| New Paris .....                       | 91                            | 53       | 73.2  | 3.20                     |                         | Happy Valley .....                   | 102                           | 33       | 66.0  | 0.46                      |                         | Lewisburg .....                    |                               |          |       | 9.68                     | 9.68                    |
| New Waterford .....                   | 92                            | 47       | 72.1  | 6.50                     |                         | Heppner .....                        | 110                           | 45       | 70.8  | 0.21                      |                         | Lock Haven <sup>a</sup> .....      |                               |          |       | 5.11                     | 5.11                    |
| North Lewisburg .....                 | 96                            | 47       | 72.4  | 2.70                     |                         | Hood River (near) <sup>x</sup> ..... | 96                            | 47       | 76.8  | 0.09                      |                         | Lock Haven <sup>b</sup> .....      |                               |          |       | 4.90                     | 4.90                    |
| North Royalton .....                  | 94                            | 49       | 73.1  | 4.27                     |                         | Jacksonville .....                   | 99                            | 47       | 72.2  | 0.18                      |                         | Lock No. 4 .....                   |                               |          |       | 7.70                     | 7.70                    |
| Northwalk .....                       | 95                            | 46       | 72.1  | 4.19                     |                         | Joseph .....                         | 94                            | 41       | 67.0  | 0.78                      |                         | Lycippus .....                     |                               |          |       | 9.13                     | 9.13                    |
| Oberlin .....                         | 94                            | 45       | 72.9  | 4.22                     |                         | Junction City <sup>*1</sup> .....    | 102                           | 52       | 68.6  | 0.13                      |                         | Mifflin .....                      |                               |          |       | 6.90                     | 6.90                    |
| Ohio State University .....           | 92                            | 50       | 74.0  | 5.36                     |                         | Klamath Falls .....                  | 100                           | 41       | 71.1  | T.                        |                         | Oil Creek .....                    |                               |          |       | 6.73                     | 6.73                    |
| Orangeville .....                     | 91                            | 46       | 70.6  | 5.01                     |                         | Lafayette <sup>*1</sup> .....        | 103                           | 54       | 67.8  | 0.00                      |                         | Ottsville .....                    |                               |          |       | 5.70                     | 5.70                    |
| Ottawa .....                          | 93                            | 50       | 72.6  | 3.75                     |                         | Lagrange .....                       | 103                           | 41       | 74.3  | 0.64                      |                         | Parker .....                       |                               |          |       | 6.86                     | 6.86                    |
| Pataskala <sup>t</sup> .....          | 92                            | 48       | 73.6  | 4.66                     |                         | Lakeview <sup>t</sup> .....          | 98                            | 40       | 68.5  |                           |                         | Philadelphia <sup>b</sup> .....    |                               |          |       | 8.43                     | 8.43                    |
| Perry .....                           |                               |          |       | 6.61                     |                         | Langlois .....                       | 80                            | 48       | 65.0  | 0.52                      |                         | Point Pleasant .....               |                               |          |       | 6.07                     | 6.07                    |
| Philo .....                           | 96                            | 48       | 74.3  | 5.87                     |                         | Lone rock .....                      | 106                           | 42       | 68.9  | 0.17                      |                         | Pottstown .....                    |                               |          |       | 6.84                     | 6.84                    |
| Plattsburgh .....                     | 91                            | 51       | 72.9  | 4.52                     |                         | McMinnville .....                    | 101                           | 46       | 67.6  | 0.79                      |                         | Quakertown .....                   |                               |          |       | 7.38                     | 7.38                    |
| Point Marblehead <sup>*10</sup> ..... | 98                            | 55       | 74.2  |                          |                         | Merlin <sup>*1</sup> .....           | 104                           | 48       | 73.6  | 0.02                      |                         | Reading <sup>2</sup> .....         |                               |          |       | 7.89                     | 7.89                    |
| Portsmouth <sup>a</sup> .....         | 95                            | 56       | 76.2  | 4.78                     |                         | Monmouth <sup>a</sup> .....          | 103                           | 58       | 70.9  | 0.26                      |                         | Reedsville .....                   |                               |          |       | 7.10                     | 9.98                    |
| Portsmouth <sup>b</sup> .....         | 92                            | 58       | 76.4  | 6.92                     |                         | Mount Angel <sup>t</sup> .....       | 100                           | 49       | 67.4  | 0.62                      |                         | Renovo <sup>a</sup> .....          |                               |          |       | 5.95                     | 5.95                    |
| Richwood .....                        | 98                            | 60       | 76.6  | 3.53                     |                         | Nehalem .....                        |                               |          |       | Renovo <sup>b</sup> ..... |                         |                                    |                               | 7.12     | 7.12  |                          |                         |
| Ridgeville Corners .....              |                               |          |       | 1.64                     |                         | Newberg .....                        | 103                           | 45       | 63.2  | 0.29                      |                         | Ridgway <sup>t</sup> .....         |                               |          |       | 8.25                     | 8.25                    |
| Rockyridge .....                      | 91                            | 45       | 70.0  | 3.26                     |                         | Newbridge .....                      | 103                           | 40       | 71.2  | 0.15                      |                         | Saegerstown .....                  |                               |          |       | 6.25                     | 6.25                    |
| Rosewood .....                        | 91                            | 49       | 71.8  | 3.78                     |                         | Newport .....                        | 80                            | 45       | 58.2  | 0.55                      |                         | Salem Corners .....                |                               |          |       | 6.05                     | 6.05                    |
| Seaman .....                          | 100                           | 54       | 77.3  | 3.98                     |                         | Pendleton .....                      | 119                           | 47       | 75.0  | 0.06                      |                         | Seisholtzville .....               |                               |          |       | 5.24                     | 5.24                    |
| Shenandoah .....                      | 94                            | 46       | 71.6  | 5.50                     |                         | Placer .....                         |                               |          |       | Selinsgrove .....         |                         |                                    |                               | 6.86     | 6.86  |                          |                         |
| Sidney <sup>b</sup> .....             | 96                            | 52       | 74.3  | 3.63                     |                         | Prineville .....                     | 111                           | 30       | 69.5  | 0.03                      |                         | Shawmunt .....                     |                               |          |       | 6.18                     | 6.18                    |
| Sinking Spring <sup>t</sup> .....     | 92                            | 50       | 74.2  | 2.43                     |                         | Riddles <sup>*1</sup> .....          | 102                           | 45       | 69.0  | 0.35                      |                         | Sinamahoning .....                 |                               |          |       | 8.82                     | 8.82                    |
| Somerset <sup>t</sup> .....           | 92                            | 56       | 76.6  | 5.38                     |                         | Riverside .....                      | 106                           | 39       | 73.1  | 0.06                      |                         | Smethport .....                    |                               |          |       | 6.08                     | 6.08                    |
| Springboro .....                      |                               |          |       | 5.33                     |                         | Salem .....                          | 98                            | 46       | 68.2  | 0.06                      |                         | Sinithi Corners .....              |                               |          |       | 7.05                     | 7.05                    |
| Strongsville .....                    |                               |          |       | 5.64                     |                         | Sheridan <sup>*1</sup> .....         | 98                            | 50       | 67.0  | 1.08                      |                         | Somerset .....                     |                               |          |       | 9.31                     | 9.31                    |
| Sylvania .....                        | 94                            | 47       | 70.4  | 1.40                     |                         | Silver Lake .....                    | 101                           | 31       | 65.4  | 0.05                      |                         | South Bethlehem .....              |                               |          |       | 5.2                      | 5.2                     |
| Thurman .....                         | 93                            | 56       | 75.4  | 4.81                     |                         | Silverton <sup>t</sup> .....         | 104                           | 58       | 70.6  | 0.05                      |                         | South Eaton .....                  |                               |          |       | 6.30                     | 6.30                    |
| Tiffin <sup>t</sup> .....             | 92                            | 51       | 72.6  | 7.42                     |                         | Siskiyou <sup>*1</sup> .....         | 98                            | 48       | 71.6  | 0.00                      |                         | State College .....                |                               |          |       | 6.70                     | 6.70                    |
| Upper Sandusky .....                  | 97                            | 45       | 73.7  | 3.78                     |                         | Sparta .....                         | 100                           | 38       | 72.2  | 0.75                      |                         | Sunbury .....                      |                               |          |       | 8.43                     | 8.43                    |
| Urbana .....                          | 89                            | 51       | 71.2  | 2.96                     |                         | Springfield <sup>*1</sup> .....      | 97                            | 50       | 67.7  | 0.21                      |                         | Swarthmore .....                   |                               |          |       | 4.68                     | 4.68                    |
| Vanceburg .....                       | 93                            | 55       | 75.4  | 4.35                     |                         | Stafford .....                       | 102                           | 50       | 68.8  | 0.01                      |                         | Swiftwater .....                   |                               |          |       | 5.70                     | 5.70                    |
| Vanwert .....                         | 94                            | 48       | 73.6  | 3.61                     |                         | The Dalles <sup>t</sup> .....        | 103                           | 51       | 74.3  | 0.02                      |                         | Towanda .....                      |                               |          |       | 6.84                     | 6.84                    |
| Vermillion .....                      | 92                            | 49       | 71.3  | 4.27                     |                         | Tillamook Rock .....                 |                               |          |       | 0.18                      |                         | Trout Run .....                    |                               |          |       | 8.02                     | 8.02                    |
| Vickery .....                         | 95                            | 46       | 73.1  | 3.60                     |                         | Toledo .....                         | 95                            | 50       | 64.0  | 0.30                      |                         | Uniontown .....                    |                               |          |       | 6.13                     | 6.13                    |
| Walnut .....                          |                               |          |       | 4.98                     |                         | Umatilla .....                       |                               |          |       | 0.07                      |                         | Warren <sup>t</sup> .....          |                               |          |       | 6.73                     | 6.73                    |
| Warren .....                          | 92                            | 47       | 72.2  | 5.43                     |                         | Vale .....                           | 105                           | 41       | 71.9  | 0.21                      |                         | Wellsboro .....                    |                               |          |       | 5.18                     | 5.18                    |
| Warsaw .....                          | 96                            | 45       | 73.7  | 3.99                     |                         | Vernonia .....                       | 105                           | 43       | 67.5  | 0.05                      |                         | West Chester .....                 |                               |          |       | 4.76                     | 4.76                    |
| Wauseon .....                         | 95                            | 44       | 72.3  | 2.24                     |                         | West Fork <sup>*1</sup> .....        | 106                           | 50       | 70.4  | 0.00                      |                         | West Newton <sup>t</sup> .....     |                               |          |       | 6.04                     | 6.04                    |
| Waverly .....                         | 95                            | 55       | 77.0  | 3.96                     |                         | Weston .....                         | 110                           | 37       | 73.1  | 0.40                      |                         | White Haven .....                  |                               |          |       | 6.15                     | 6.15                    |
| Waynesville .....                     | 94                            | 52       | 74.3  | 6.24                     |                         | Williams .....                       | 99                            | 43       | 67.7  | 0.03                      |                         | Wilkesbarre <sup>t</sup> .....     |                               |          |       | 5.16                     | 5.16                    |
| Wellington .....                      | 94 <sup>c</sup>               | 45       | 73.6  | 4.50                     |                         | <i>Pennsylvania.</i>                 |                               |          |       |                           |                         |                                    |                               |          |       |                          |                         |
| Westerville .....                     | 90                            | 51       | 72.6  | 4.63                     |                         | Altoona .....                        | 91                            | 47       | 71.6  | 3.75                      |                         | Williamsport .....                 |                               |          |       | 4.75                     | 4.75                    |
| Willoughby .....                      |                               |          |       | 3.68                     |                         | Aqueduct .....                       | 97                            | 45       | 75.8  | 7.51                      |                         | York <sup>t</sup> .....            |                               |          |       | 4.44                     | 4.44                    |
| Wooster <sup>b</sup> .....            | 90                            | 46       | 71.1  | 5.53                     |                         | Athens .....                         | 95                            | 42       | 71.5  | 5.86                      |                         | <i>Rhode Island.</i>               |                               |          |       |                          |                         |
| Youngstown .....                      | 95                            | 48       | 73.9  | 4.39                     |                         | Beaver Dam .....                     |                               |          |       | 5.62                      |                         | Bristol .....                      |                               |          |       | 6.29                     | 6.29                    |
| Zanesville <sup>t</sup> .....         |                               |          |       | 4.44                     |                         | Cassandra .....                      | 85                            | 51       | 69.0  | 6.49                      |                         | Kingston .....                     |                               |          |       | 6.85                     | 6.85                    |
| <i>Oklahoma.</i>                      |                               |          |       |                          |                         |                                      |                               |          |       |                           |                         |                                    |                               |          |       |                          |                         |
| Anadarko <sup>t</sup> .....           | 105                           | 53       | 80.6  | 1.40                     |                         | Cedarrun .....                       |                               |          |       | 5.23                      |                         | Lonsdale .....                     |                               |          |       | 6.77                     | 6.77                    |
| Arapaho <sup>t</sup> .....            | 101                           | 55       | 78.8  | 1.22                     |                         | Centerhall <sup>t</sup> .....        | 90                            | 48       | 70.8  | 7.37                      |                         | Provvidence .....                  |                               |          |       | 6.63                     | 6.63                    |
| Burnett <sup>t</sup> .....            | 97                            | 57       | 76.8  | 2.96                     |                         | Chambersburg <sup>t</sup> .....      | 92                            | 55       | 73.0  | 7.66                      |                         | Providence <sup>c</sup> .....      |                               |          |       | 7.63                     | 7.63                    |
| Clifton <sup>t</sup> .....            | 100                           | 53       | 78.0  | 2.82                     |                         | Coatesville .....                    | 95                            | 50       | 75.6  | 7.03                      |                         | South Carolina.                    |                               |          |       | 6.00                     | 6.00                    |
| Fort Reno <sup>t</sup> .....          | 101                           | 57       | 79.1  | 2.20                     |                         | Confluence <sup>t</sup> .....        | 91                            | 48       | 71.8  | 8.26                      |                         | Allendale .....                    |                               |          |       | 17.90                    | 17.90                   |
| Fort Sill .....                       | 100                           | 58       | 78.6  | 4.50                     |                         | Coopersburg .....                    | 91                            | 56       | 74.3  | 5.03                      |                         | Anderson <sup>t</sup> .....        |                               |          |       | 9.34                     | 9.34                    |
| Guthrie .....                         | 99                            | 61       | 80.6  | 2.81                     |                         | Davis Island Dam <sup>t</sup> .....  | 99                            | 53       | 73.2  | 4.99                      |                         | Batesburg <sup>t</sup> .....       |                               |          |       | 8.94                     | 8.94                    |
| Hennessey .....                       |                               |          |       | 3.25                     |                         | Derry Station .....                  | 99                            | 53       | 73.2  | 6.29                      |                         | Blackville <sup>t</sup> .....      |                               |          |       | 8.48                     | 8.48                    |
| Hopeton .....                         | 97                            | 57       | 78.2  | 4.01                     |                         | Doylestown .....                     |                               |          |       | 7.26                      |                         | Camden <sup>t</sup> .....          |                               |          |       | 7.17                     | 7.17                    |
| Jefferson .....                       |                               |          |       | 6.40                     |                         | Driftwood .....                      |                               |          |       | 4.83                      |                         | Central .....                      |                               |          |       | 18.55                    | 18.55                   |
| Kingfisher .....                      | 102                           | 54       | 79.3  | 4.25                     |                         | Dushore .....                        | 88                            | 37       | 65.8  | 6.08                      |                         | Cheraw <sup>t</sup> .....          |                               |          |       | 12.08                    | 12.08                   |
| Mangum <sup>t</sup> .....             | 102                           | 58       | 79.4  | 3.41                     |                         | Dyberry .....                        | 88                            | 38       | 68.3  | 5.95                      |                         | Clemson College <sup>a</sup> ..... |                               |          |       | 7.07                     | 7.07                    |
| Newkirk .....                         | 99                            | 60       | 79.2  | 8.97                     |                         | East Bloomsburg .....                |                               |          |       | 5.93                      |                         | Conway <sup>t</sup> .....          |                               |          |       | 9.54                     | 9.54                    |
| Pawhuska .....                        | 94                            | 60       | 77.2  | 5.30                     |                         | East Mauch Chunk .....               | 95                            | 45       | 72.8  | 7.35                      |                         | Darlington .....                   |                               |          |       | 8.12                     | 8.12                    |
| Prudence <sup>t</sup> .....           | 103                           | 55       | 76.5  | 3.29                     |                         | Emporium .....                       | 88                            | 46       | 70.2  | 5.87                      |                         | Edisto <sup>t</sup> .....          |                               |          |       | 7.52                     | 7.52                    |
| Putnam .....                          | 100                           | 60       | 77.1  | 8.85                     |                         | Everett .....                        | 92                            | 46       | 71.5  | 9.11                      |                         | Florence .....                     |                               |          |       | 12.12                    | 12.12                   |
| Sac and Fox Agency .....              | 100                           | 56       | 78.1  | 3.37                     |                         | Farrandsville .....                  |                               |          |       | 5.06                      |                         | Gaffney <sup>t</sup> .....         |                               |          |       | 4.28                     | 4.28</td                |

TABLE II.—*Meteorological record of voluntary and other cooperating observers—Continued.*

| Stations.                                 | Temperature.<br>(Fahrenheit.) |                 |                   | Precipita-<br>tion.      |                         | Stations.                                  | Temperature.<br>(Fahrenheit.) |          |       | Precipita-<br>tion.      |                         | Stations.                       | Temperature.<br>(Fahrenheit.) |          |       | Precipita-<br>tion.      |                         |  |
|---|-------------------------------|-----------------|-------------------|--------------------------|-------------------------|--|-------------------------------|----------|-------|--------------------------|-------------------------|---------------------------------|-------------------------------|----------|-------|--------------------------|-------------------------|--|
|   | Maximum.                      | Minimum.        | Mean.             | Rain and melted<br>snow. | Total depth of<br>snow. |  | Maximum.                      | Minimum. | Mean. | Rain and melted<br>snow. | Total depth of<br>snow. |                                 | Maximum.                      | Minimum. | Mean. | Rain and melted<br>snow. | Total depth of<br>snow. |  |
| <i>South Carolina—Cont'd.</i>             |                               |                 |                   |                          |                         | <i>Tennessee—Cont'd.</i>                   |                               |          |       |                          |                         | <i>Texas—Cont'd.</i>            |                               |          |       |                          |                         |  |
| Longshore †                               | 0                             | 0               | 0                 | In. s.                   | In. s.                  | Jackson † <sup>b</sup>                     | 93                            | 60       | 77.3  | In. s.                   | In. s.                  | Marathon                        | 91                            | 53       | 74.4  | 0                        | 0                       |  |
| Mount Carmel †                            | 66                            | .....           | 8.30              |                          |                         | Johnsonville                               | 97                            | 59       | 78.0  | 1.92                     |                         | Marshall                        | 92                            | 70       | 81.6  | 2.32                     | In. s.                  |  |
| Pinopolis <sup>a</sup> †                  | 88                            | 72              | 77.3              | 14.85                    |                         | Jonesboro <sup>a</sup> †                   | 86                            | 63       | 73.4  | 5.84                     |                         | Menardville                     | 99                            | 52       | 78.5  | 2.24                     |                         |  |
| Port Royal †                              | 92                            | 71              | 81.1              | 24.68                    |                         | Kinston †                                  | .....                         | .....    | ..... | 5.06                     |                         | Midland                         | 100                           | 49       | 75.4  | 2.60                     |                         |  |
| St. Georges†                              | 94                            | 68              | 80.0              | 7.59                     |                         | Lafayette <sup>a</sup> † <sup>b</sup>      | 96                            | 62       | 77.1  | 6.10                     |                         | Mount Blanco †                  | 96                            | 54       | 76.6  | 2.13                     |                         |  |
| St. Matthews†                             | 97                            | 69              | 79.8              | 7.66                     |                         | Lewisburg <sup>a</sup> †                   | 90                            | 59       | 77.1  | 4.35                     |                         | New Braunfels†                  | 102                           | 64       | 82.8  | 3.18                     |                         |  |
| St. Stephens†                             | .....                         | .....           | 14.66             |                          |                         | Liberty †                                  | 94                            | 63       | 77.2  | 4.00                     |                         | Paner                           | .....                         | .....    | ..... | 2.70                     |                         |  |
| Santuck †                                 | 93                            | 66              | 77.4              | 6.39                     |                         | Lynnville †                                | 91                            | 61       | 76.3  | 3.83                     |                         | Paris                           | 102                           | 65       | 81.9  | 3.30                     |                         |  |
| Shaws Fork                                | 97                            | 63              | 78.1              | 9.63                     |                         | McKenzie <sup>a</sup> †                    | 93                            | 60       | 77.8  | 5.65                     |                         | Point Isabel <sup>a</sup> †     | 92                            | 80       | 84.4  | T.                       |                         |  |
| Smiths Mills †                            | .....                         | .....           | 9.74              |                          |                         | McMinnville                                | 94                            | 57       | 76.6  | 4.90                     |                         | Rheinland †                     | 106                           | 60       | 82.6  | 3.24                     |                         |  |
| Society Hill †                            | 94                            | 67              | 80.0              | 7.73                     |                         | Madison                                    | 97                            | 57       | 78.3  | 4.08                     |                         | Roby                            | 100                           | 57       | 79.1  | 1.99                     |                         |  |
| Spartanburg                               | 98                            | 66              | 77.9              | 6.82                     |                         | Maryville <sup>a</sup> † <sup>b</sup>      | 91                            | 62       | 77.0  | 4.74                     |                         | Rockport <sup>a</sup> †         | 91                            | 78       | 83.8  |                          |                         |  |
| Statesburg †                              | 91                            | 67              | 79.0              | 8.36                     |                         | Milan                                      | 98                            | 61       | 79.4  | 1.85                     |                         | Rocksprings                     | .....                         | .....    | ..... | 1.58                     |                         |  |
| Summerville                               | .....                         | .....           | 11.27             |                          |                         | Nashville (near)                           | 92                            | 61       | 77.9  | 3.21                     |                         | Runge †                         | 101                           | 73       | 86.2  | 2.96                     |                         |  |
| Trenton                                   | 92                            | 69              | 79.0              | 6.32                     |                         | Newport †                                  | 92                            | 59       | 76.0  | 6.12                     |                         | San Antonio                     | 100                           | 70       | 85.8  | 3.41                     |                         |  |
| Trial                                     | 90                            | 66              | 76.6              | 15.20                    |                         | Nunnelly                                   | 93                            | 59       | 76.2  | 4.37                     |                         | Sanderston                      | .....                         | 56       | ..... | 0.52                     |                         |  |
| Walhalla                                  | 89                            | 64              | 75.6              | 7.69                     |                         | Oak Hill                                   | 92                            | 58       | 75.6  | 4.07                     |                         | San Marcos <sup>a</sup> †       | 99                            | 64       | 82.4  | 2.10                     |                         |  |
| Walling                                   | 96                            | 56              | 78.3              | 5.91                     |                         | Palmetto <sup>a</sup> †                    | 95                            | 59       | 78.4  | 3.44                     |                         | Sugarland                       | .....                         | 99       | 65    | 82.8                     | 2.50                    |  |
| Winnisboro                                | 92                            | 68              | 78.0              | 7.96                     |                         | Perryear <sup>a</sup> †                    | 93                            | 60       | 77.3  | 3.22                     |                         | Temple <sup>a</sup> †           | 102                           | 62       | 82.8  | 1.19                     |                         |  |
| Yemassee <sup>a</sup> †                   | 97                            | 69              | 81.2              | 10.35                    |                         | Pope                                       | 97                            | 58       | 78.2  | 3.51                     |                         | Temple <sup>b</sup>             | .....                         | 99       | 68    | 83.1                     | 1.19                    |  |
| Yorkville                                 | 98                            | 67              | 78.3              | 9.03                     |                         | Rogersville <sup>a</sup> †                 | 87                            | 61       | 78.8  | 5.81                     |                         | Tyler                           | 99                            | 55       | 76.5  | 1.77                     |                         |  |
| <i>South Dakota.</i>                      |                               |                 |                   |                          |                         | Rugby                                      | 90                            | 55       | 74.0  | 2.52                     |                         | Valentine <sup>a</sup> †        | 99                            | 55       | 76.5  | 2.92                     |                         |  |
| Aberdeen †                                | 100                           | 40              | 70.3              | 1.61                     |                         | Savannah                                   | 99                            | 62       | 79.8  | 1.65                     |                         | Victoria                        | .....                         | 98       | 60    | 86.0                     | 1.07                    |  |
| Alexandria †                              | 105                           | 46              | 72.2              | 2.44                     |                         | Sewanee <sup>a</sup> †                     | 91                            | 55       | 73.2  | 3.65                     |                         | Waco                            | 101                           | 67       | 86.0  | 1.71                     |                         |  |
| Armour                                    | 102                           | 47              | 71.2              | 1.48                     |                         | Silverlake                                 | 83                            | 55       | 69.2  | 4.77                     |                         | Water Valley                    | .....                         | 100      | 61    | 83.0                     | 2.70                    |  |
| Ashcroft †                                | 101                           | 38              | 71.0              | 0.57                     |                         | Springdale                                 | 95                            | 59       | 77.6  | 5.03                     |                         | Waxahachie <sup>a</sup> †       | 100                           | 61       | 83.0  | 1.19                     |                         |  |
| Bowdle                                    | 105 <sup>a</sup>              | 39 <sup>a</sup> | 69.6 <sup>a</sup> | 0.28                     |                         | Springfield                                | 96                            | 59       | 77.9  | 2.20                     |                         | Weatherford †                   | 100                           | 61       | 81.6  | 2.43                     |                         |  |
| Brookings <sup>a</sup> †                  | 101                           | 40              | 69.6              | 2.78                     |                         | Sylvia                                     | 93                            | 58       | 76.6  | 3.73                     |                         | Wichita Falls †                 | .....                         | .....    | ..... | Utah.                    |                         |  |
| Canton                                    | 98                            | 46              | 70.2              | 1.99                     |                         | Tazewell                                   | .....                         | .....    | ..... | .....                    |                         | Alpine <sup>a</sup> †           | 99                            | 56       | 76.0  | 0.94                     |                         |  |
| Centerville                               | .....                         | .....           | 1.66              |                          |                         | Tellico Plains <sup>a</sup> †              | 95                            | 61       | 77.8  | 3.72                     |                         | Blue Creek <sup>a</sup> †       | 99                            | 56       | 76.0  | 0.60                     |                         |  |
| Chamberlain <sup>a</sup> †                | 103                           | 49              | 73.7              | 1.95                     |                         | Tracy City                                 | 89                            | 55       | 72.8  | 4.09                     |                         | Brigham                         | .....                         | 105      | 58    | 81.2                     | 0.44                    |  |
| Chandler                                  | .....                         | .....           | 3.00              |                          |                         | Trenton                                    | 92                            | 57       | 76.2  | 2.07                     |                         | Cisco <sup>a</sup> †            | 101                           | 48       | 77.5  | 0.13                     |                         |  |
| Clark                                     | .....                         | .....           | 2.12              |                          |                         | Tullahoma †                                | 91                            | 56       | 75.3  | 2.40                     |                         | Corinne                         | 104                           | 56       | 77.4  | 0.07                     |                         |  |
| Desmet                                    | 101                           | 42              | 69.0              | 1.62                     |                         | Union City                                 | 93                            | 60       | 77.6  | 3.00                     |                         | Ferron                          | 106                           | 42       | 74.2  | 0.06                     |                         |  |
| Doland                                    | .....                         | 42              | .....             | 0.19                     |                         | Wildersville                               | 92                            | 62       | 76.8  | 2.34                     |                         | Fillmore <sup>a</sup> †         | 96                            | 48       | 74.1  | 0.66                     |                         |  |
| Farmingdale                               | .....                         | .....           | 0.28              |                          |                         | Yukon                                      | 93                            | 62       | 77.6  | 2.51                     |                         | Fort Duchesne <sup>a</sup> †    | 96                            | 48       | 71.4  | 1.46                     |                         |  |
| Flandreau <sup>a</sup> †                  | 103                           | 45              | 70.1              | 1.66                     |                         | Texas.                                     | .....                         | .....    | ..... | .....                    |                         | Giles                           | 105                           | 54       | 74.4  | 0.59                     |                         |  |
| Forestburg †                              | 104                           | 42              | 70.3              | 0.53                     |                         | Albany <sup>a</sup> † <sup>b</sup>         | 96                            | 60       | 80.0  | 2.27                     |                         | Heber                           | 98                            | 42       | 68.0  | 0.64                     |                         |  |
| Forest City                               | 108                           | 45              | 73.5              | 0.55                     |                         | Alvin                                      | .....                         | .....    | ..... | .....                    |                         | Huntsville                      | .....                         | 98       | 60    | 78.3                     | 0.94                    |  |
| Fort Meade <sup>a</sup> †                 | 101                           | 48              | 71.6              | 1.50                     |                         | Anna                                       | .....                         | .....    | ..... | .....                    |                         | Keiton <sup>a</sup> †           | 98                            | 60       | 78.3  | 0.00                     |                         |  |
| Gann Valley                               | 99                            | 48              | 72.2              | 2.10                     |                         | Anson                                      | .....                         | .....    | ..... | .....                    |                         | Levan <sup>a</sup> †            | 98                            | 48       | 71.4  | 0.73                     |                         |  |
| Gary                                      | 102                           | 47              | 67.5              | 6.14                     |                         | Arthur City <sup>a</sup> †                 | .....                         | .....    | ..... | .....                    |                         | Loa                             | 94                            | 38       | 65.1  | 1.12                     |                         |  |
| Goudyville                                | 102                           | 37              | 69.2              | 2.09                     |                         | Austin <sup>a</sup> <sup>b</sup>           | 98                            | 65       | 83.0  | 3.91                     |                         | Logan                           | 96                            | 54       | 74.9  | 0.11                     |                         |  |
| Harney <sup>a</sup>                       | 99 <sup>b</sup>               | 38 <sup>b</sup> | 68.5 <sup>b</sup> | 0.77                     |                         | Ballinger <sup>a</sup> †                   | 99                            | 55       | 80.0  | 0.74                     |                         | Millville                       | .....                         | 98       | 60    | 78.3                     | 0.11                    |  |
| Hightmore                                 | 101                           | 47              | 74.4              | 0.62                     |                         | Beaumont                                   | 100                           | 71       | 83.6  | 4.12                     |                         | Minersville                     | 98                            | 48       | 75.2  | 0.94                     |                         |  |
| Hotch City <sup>a</sup> †                 | 107                           | 43              | 72.8              | 0.47                     |                         | Beeville <sup>a</sup> †                    | 103                           | 69       | 85.6  | 2.50                     |                         | Moab <sup>a</sup> †             | 101                           | 52       | 77.8  | 0.35                     |                         |  |
| Howard <sup>a</sup> †                     | 104                           | 40              | 71.9              | 1.30                     |                         | Blanco <sup>a</sup> †                      | 98                            | 71       | 86.4  | 2.40                     |                         | Mount Pleasant <sup>a</sup> †   | 109                           | 49       | 75.2  | 0.58                     |                         |  |
| Ipswich                                   | 99                            | 40              | 68.5              | 0.98                     |                         | Boerne <sup>a</sup> †                      | 99                            | 67       | 82.0  | 1.70                     |                         | Ogden <sup>a</sup> <sup>b</sup> | 100                           | 65       | 80.4  | 0.30                     |                         |  |
| Kimball <sup>a</sup> †                    | 100                           | 51              | 71.8              | 1.37                     |                         | Brenham <sup>a</sup> †                     | 100                           | 69       | 82.9  | 3.74                     |                         | Pahreh <sup>a</sup> †           | 98                            | 57       | 76.8  | 1.50                     |                         |  |
| Leslie <sup>a</sup> †                     | 106                           | 38              | 72.7              | 1.84                     |                         | Brighton                                   | 97                            | 63       | 80.8  | 0.74                     |                         | Parowan <sup>a</sup> †          | 95                            | 48       | 71.9  | 1.46                     |                         |  |
| Mellette <sup>a</sup> †                   | 101                           | 40              | 71.2              | 0.73                     |                         | Brownwood                                  | 102                           | 64       | 83.8  | 3.55                     |                         | Pinto                           | 95                            | 42       | 69.2  | 0.60                     |                         |  |
| Mennio <sup>a</sup> †                     | 103                           | 48              | 72.2              | 1.11                     |                         | Burnet <sup>a</sup> †                      | 98                            | 63       | 80.4  | 1.18                     |                         | Promontory <sup>a</sup> †       | 105                           | 61       | 78.3  | T.                       |                         |  |
| Millbank                                  | 99                            | 42              | 68.0              | 2.58                     |                         | Childress <sup>a</sup> †                   | 98                            | 61       | 79.0  | 2.42                     |                         | Provo                           | 105                           | 42       | 73.5  | 0.91                     |                         |  |
| Mitchell <sup>a</sup> †                   | 103                           | 45              | 70.3              | 1.21                     |                         | Coleman <sup>a</sup> †                     | 96                            | 59       | 81.0  | 1.54                     |                         | Ridgefield <sup>a</sup> †       | 98                            | 44       | 71.5  | 0.35                     |                         |  |
| Montrose                                  | 100                           | 46              | 70.4              | 1.24                     |                         | College Station <sup>a</sup> †             | 93                            | 61       | 81.6  | 0.21                     |                         | St. George <sup>a</sup> †       | 110                           | 56       | 82.3  | 0.74                     |                         |  |
| Parkston                                  | 102 <sup>a</sup>              | 40              | 68.2 <sup>a</sup> | 0.92                     |                         | Colorado                                   | .....                         | .....    | ..... | .....                    |                         | Scipio <sup>a</sup> †           | 97                            | 40       | 71.5  | 0.44                     |                         |  |
| Plankinton <sup>a</sup> †                 | 102                           | 46              | 72.2              | 1.98                     |                         | Columbia <sup>a</sup> †                    | 92                            | 68       | 80.7  | 6.49                     |                         | Snowville                       | 96                            | 44       | 71.6  | 0.06                     |                         |  |
| Redfield                                  | 100                           | 42              | 70.0              | 0.79                     |                         | Crones                                     | 99                            | 68       | 82.6  | 4.51                     |                         | Soldier Summit                  | 98                            | 35       | 67.5  | 0.10                     |                         |  |
| Rochford                                  | .....                         | .....           | 1.36              |                          |                         | Corsicana <sup>a</sup> † <sup>b</sup>      | 102                           | 63       | 84.2  | 1.86                     |                         | Terrace <sup>a</sup> †          | 97                            | 54       | 72.0  | T.                       |                         |  |
| Rosebud                                   | 102                           | 45              | 71.6              | 0.98                     |                         | Crozier <sup>a</sup> †                     | 98                            | 71       | 84.8  | 1.21                     |                         | Tooele <sup>a</sup> †           | 94                            | 56       | 75.4  | 0.88                     |                         |  |
| Shiloh                                    | 110                           | 48              | 70.8              | 0.51                     |                         | Dallas <sup>a</sup> †                      | 98                            | 61       | 81.5  | 1.66                     |                         | Tropic                          | 91                            | 44       | 67.3  | 0.52                     |                         |  |
| Silver City                               | .....                         | .....           | 0.08              |                          |                         | Danevang <sup>a</sup> †                    | 100                           | 68       | 82.8  | 4.19                     |                         | Woodruff                        | 90                            | 36       | 64.8  | 0.44                     | Vermont.                |  |
| Siouxs <sup>a</sup> Falset <sup>a</sup> † | 101                           | 43              | 70.4              | 1.67                     |                         | Dublin <sup>a</sup> †                      | 99                            | 61       | 80.4  | 5.87                     |                         | Bennington                      | 90                            | 44       | 70.0  | 8.62                     |                         |  |
| Spearfish <sup>a</sup> †                  | 97                            | 48              | 71.2              | 0.05                     |                         | Emory                                      | 97                            | 64       | 79.6  | 3.23                     |                         | Brattleboro                     | 92                            | 44       | 70.6  | 4.84                     |                         |  |
| Tyndall <sup>a</sup> †                    | 100                           | 48              | 72.0              | 1.91                     |                         | Estelle <sup>a</sup> †                     | 101                           | 60       | 81.9  | 4.27                     |                         | Burlington                      | 88                            | 53       | 70.4  | 4.58                     |                         |  |
| Watertown                                 | 94                            | 40              | 66.3              | 1.93                     |                         | Forestburg                                 | 104                           | 62       | 81.6  | 4.37                     |                         | Cheisea <sup>a</sup> †          | 85                            | 39       | 65.4  | 4.71                     |                         |  |
| Wentworth <sup>a</sup> †                  | 103                           | 44              | 70.6              | 0.87                     |                         | Fort McIntosh                              | 103                           | 70       | 87.8  | 1.56                     |                         | Cornwall                        | 87                            | 44       | 69.5  | 2.39                     |                         |  |
| Wessington Springs                        | 93                            | 47              | 68.0              | 1.18                     |                         | Fort Ringgold <sup>a</sup> †               | 105                           | 69       | 86.6  | 0.59                     |                         | Hartland <sup>a</sup> †         | 86                            | 38       | 66.2  | 5.02                     |                         |  |
| Whiteswan <sup>a</sup> †                  | 101                           | 51              | 73.5              | 1.74                     |                         | Fort Worth                                 | 102                           | 66       | 83.0  | 3.90                     |                         | Jacksonville                    | 85                            | 35       | 64.5  | 5.06                     |                         |  |
| <i>Tennessee.</i>                         |                               |                 |                   |                          |                         | Fredericksburg <sup>a</sup> † <sup>b</sup> | 98                            | 61       | 82.1  | 1.93                     |                         | Norwich                         | 89                            | 37       | 67.2  | 4.01                     |                         |  |
| Andersonville                             | 90                            | 60              | 75.4              | 5.51                     |                         | Houston <sup>a</sup> †                     | 92                            | 73       | 81.8  | 5.59                     |                         | St. Johnsbury                   | 84                            | 40       | 66.8  | 5.81                     |                         |  |
| Arlington                                 | 97                            | 62              | 79.2              | 3.58                     |                         | Hulen                                      | 101                           | 63       | 81.4  | 2.94                     | </td                    |                                 |                               |          |       |                          |                         |  |

TABLE II.—*Meteorological record of voluntary and other cooperating observers—Continued.*

| Stations.                     | Temperature.<br>(Fahrenheit.) |                 |       | Precipita-<br>tion.      |                         | Stations | Temperature.<br>(Fahrenheit.)     |          |       | Precipita-<br>tion.      |                         | Stations. | Temperature.<br>(Fahrenheit.) |          |       | Precipita-<br>tion.      |                         |
|-------------------------------|-------------------------------|-----------------|-------|--------------------------|-------------------------|----------|-----------------------------------|----------|-------|--------------------------|-------------------------|-----------|-------------------------------|----------|-------|--------------------------|-------------------------|
|                               | Maximum.                      | Minimum.        | Mean. | Rain and melted<br>snow. | Total depth of<br>snow. |          | Maximum.                          | Minimum. | Mean. | Rain and melted<br>snow. | Total depth of<br>snow. |           | Maximum.                      | Minimum. | Mean. | Rain and melted<br>snow. | Total depth of<br>snow. |
| <b>Virginia—Cont'd.</b>       |                               |                 |       |                          |                         |          |                                   |          |       |                          |                         |           |                               |          |       |                          |                         |
| Farmville                     | 98                            | 61              | 78.9  | 3.67                     | Inns.                   |          | West Virginia—Cont'd.             | 98       | 61    | 74.2                     | Inns.                   |           | Mexico.                       | 98       | 61    | 74.2                     | Inns.                   |
| Fredericksburg†               | 98                            | 61              | 78.7  | 4.44                     |                         |          | New Cumberland                    | 95       | 50    | 74.2                     | 5.10                    |           | Ciudad P. Diaz                | 97       | 70    | 85.6                     | 2.76                    |
| Graham's Forge                | 87                            | 56              | 71.0  | 3.33                     |                         |          | New Martinsville                  | 94       | 52    | 75.2                     | 7.56                    |           | Leon de Aldamas               | 80       | 55    | 67.8                     | 7.08                    |
| Hampton                       | 92                            | 71              | 82.1  | 4.31                     |                         |          | Nuttallburg                       | 95       | 45    | 71.9                     | 4.85                    |           | Puebla                        | 76       | 51    | 62.6                     | 7.72                    |
| Hot Spring*                   | 85                            | 55              | 70.3  | 8.00                     |                         |          | Oldfields†                        | 92       | 56    | 73.6                     | 8.07                    |           | Tópobampo†                    | 93       | 78    | 85.3                     | 7.84                    |
| Lexington†                    | 90                            | 58              | 74.4  | 6.24                     |                         |          | Philipps†                         | 92       | 56    | 73.6                     | 11.57                   |           | New Brunswick                 |          |       |                          |                         |
| Manassas†                     | 94                            | 56              | 76.8  | 5.92                     |                         |          | Point Pleasant†                   | 95       | 57    | 77.0                     | 6.40                    |           | St. John                      | 75       | 51    | 62.3                     | 2.78                    |
| Marion                        | 94b                           | 57b             | 74.4  | 7.15                     |                         |          | Powellton                         | 89       | 58    | 73.2                     | 9.55                    |           |                               |          |       |                          |                         |
| Miller School                 | 98                            | 60              | 75.8  | 8.27                     |                         |          | Romney                            | 92       | 54    | 74.2                     | 6.68                    |           |                               |          |       |                          |                         |
| Monterey                      | 90                            | 52              | 67.4  | 7.50                     |                         |          | Rowlesburg†                       | 95       | 54    | 74.2                     | 5.70                    |           |                               |          |       |                          |                         |
| Petersburg†                   | 98                            | 62              | 78.6  | 2.88                     |                         |          | Upper Tract                       | 95       | 54    | 74.2                     | 8.83                    |           |                               |          |       |                          |                         |
| Quantico                      | 94                            | 62              | 75.0  | .....                    |                         |          | Weston a                          | 92       | 58    | 73.8                     | 6.77                    |           |                               |          |       |                          |                         |
| Richmond (near)†              | 97                            | 63              | 79.6  | 4.74                     |                         |          | Weston b†                         | 92       | 58    | 73.8                     | .....                   |           |                               |          |       |                          |                         |
| Rockymount†                   | 95                            | 61              | 76.6  | 7.48                     |                         |          | Wheeling a†                       | 94       | 54    | 78.2                     | 7.82                    |           |                               |          |       |                          |                         |
| Salem†                        | 93                            | 63              | 76.2  | 4.14                     |                         |          | Wheeling b†                       | 94       | 54    | 78.2                     | 5.86                    |           |                               |          |       |                          |                         |
| Speers Ferry                  |                               |                 |       | 8.59                     |                         |          | Wisconsin.                        |          |       |                          |                         |           |                               |          |       |                          |                         |
| Spottsville†                  | 96                            | 62              | 77.2  | 9.90                     |                         |          | Amherst                           | 92       | 48    | 66.4                     | 4.20                    |           |                               |          |       |                          |                         |
| Stanardsville†                | 92                            | 56              | 73.4  | 6.06                     |                         |          | Barron                            | 94       | 38    | 61.0                     | 2.51                    |           |                               |          |       |                          |                         |
| Staunton†                     | 95                            | 59              | 75.5  | 5.16                     |                         |          | Bayfield                          | 90       | 46    | 65.8                     | 2.20                    |           |                               |          |       |                          |                         |
| Stephens City†                | 98                            | 55              | 75.1  | 10.40                    |                         |          | Beloit                            | 92       | 50    | 69.8                     | 5.13                    |           |                               |          |       |                          |                         |
| Sunbeam†                      | 94                            | 65              | 79.1  | 3.48                     |                         |          | Brookhead                         | 95       | 46    | 69.4                     | 2.62                    |           |                               |          |       |                          |                         |
| Warrenton                     | 98                            | 62              | 74.2  | 6.42                     |                         |          | Chilton                           | 94       | 46    | 68.0                     | 3.78                    |           |                               |          |       |                          |                         |
| Warsaw†d                      | 95                            | 60              | 78.3  | 5.04                     |                         |          | Citypoint                         | 95       | 45    | 68.6                     | 2.50                    |           |                               |          |       |                          |                         |
| Westbrook Farm                | 96                            | 63              | 79.1  | .....                    |                         |          | Delavan                           | 93       | 47    | 69.7                     | 4.58                    |           |                               |          |       |                          |                         |
| Westpoint                     | 95                            | 62              | 78.4  | 3.18                     |                         |          | Dodzvile†                         | 92       | 50    | 68.8                     | 4.98                    |           |                               |          |       |                          |                         |
| Woodstock†                    | 92                            | 56              | 74.5  | 7.81                     |                         |          | Easton                            | 92       | 40    | 67.0                     | 1.16                    |           |                               |          |       |                          |                         |
| Wytheville                    | 90                            | 56              | 72.6  | 5.61                     |                         |          | East Claire                       | 97       | 49    | 70.4                     | .....                   |           |                               |          |       |                          |                         |
| <b>Washington.</b>            |                               |                 |       |                          |                         |          | Florence†                         | 92       | 32    | 62.4                     | 5.72                    |           |                               |          |       |                          |                         |
| Aberdeen                      | 96                            | 46              | 63.9  | 0.55                     |                         |          | Fond du Lac                       | 94       | 45    | 68.0                     | 2.52                    |           |                               |          |       |                          |                         |
| Ashford†                      |                               |                 |       | 0.56                     |                         |          | Grand River Locks                 |          |       |                          |                         |           |                               |          |       |                          |                         |
| Blaine†                       | 91                            | 37              | 60.5  | 0.78                     |                         |          | Grantsburg†                       | 94       | 42    | 66.3                     | 2.67                    |           |                               |          |       |                          |                         |
| Bridgeport*                   | 107                           | 50              | 78.0  | 0.25                     |                         |          | Gratiot                           | 90       | 45    | 66.6                     | 5.70                    |           |                               |          |       |                          |                         |
| Brinmon                       | 87                            | 50              | 66.0  | 0.05                     |                         |          | Hartford                          | 47       |       |                          | 2.07                    |           |                               |          |       |                          |                         |
| Cedar Lake                    |                               |                 |       | 0.54                     |                         |          | Hartland                          | 92       | 50    | 69.2                     | 2.91                    |           |                               |          |       |                          |                         |
| Centererville†                | 108                           | 40              | 70.6  | 0.09                     |                         |          | Harvey                            | 93       | 48    | 69.2                     | 3.94                    |           |                               |          |       |                          |                         |
| Clearwater                    | 97                            | 47              | 63.6  | 0.67                     |                         |          | Hayward                           | 95       | 39    | 62.3                     | 2.60                    |           |                               |          |       |                          |                         |
| Colfax                        | 103                           | 43              | 68.8  | 0.94                     |                         |          | Heafford Junction†                | 95       | 50    | 63.9                     | 1.44                    |           |                               |          |       |                          |                         |
| Coupeville†                   | 92                            | 46              | 64.2  | 0.23                     |                         |          | Hillsboro                         | 92       | 45    | 67.2                     | 4.50                    |           |                               |          |       |                          |                         |
| Ellensburg                    | 96                            | 44              | 70.4  | 0.29                     |                         |          | Knapp                             | 94       | 40    | 66.1                     | 3.55                    |           |                               |          |       |                          |                         |
| Ellensburg (near)             | 110                           | 48              | 73.3  | 0.31                     |                         |          | Lancaster†                        | 94       | 51    | 70.4                     | 2.51                    |           |                               |          |       |                          |                         |
| Fort Simcoe†                  | 105                           | 44              | 74.4  | 0.26                     |                         |          | Lincoln                           | 94       | 51    | 67.3                     | 2.94                    |           |                               |          |       |                          |                         |
| Fort Spokane                  | 109                           | 45              | 72.9  | 1.43                     |                         |          | Madison†                          | 87       | 55    | 69.1                     | 2.56                    |           |                               |          |       |                          |                         |
| Grandmound†                   | 99                            | 45              | 67.0  | 0.72                     |                         |          | Manitowoc                         | 95       | 49    | 66.5                     | 2.46                    |           |                               |          |       |                          |                         |
| Hunters†                      | 94                            | 40              | 64.8  | 1.12                     |                         |          | Meadow Valley†                    | 94       | 41    | 66.0                     | 2.74                    |           |                               |          |       |                          |                         |
| Kennewick†                    | 115                           | 44              | 79.2  | 0.15                     |                         |          | Medford†                          | 96       | 37    | 66.3                     | 2.30                    |           |                               |          |       |                          |                         |
| Lacenter                      | 99                            | 46              | 67.2  | 0.51                     |                         |          | Menasha                           |          |       |                          | 3.42                    |           |                               |          |       |                          |                         |
| Lakeside                      | 103                           | 50              | 75.6  | 1.03                     |                         |          | Neillsville                       | 92       | 42    | 65.4                     | 3.33                    |           |                               |          |       |                          |                         |
| Lapush                        | 68                            | 48              | 55.7  | 0.79                     |                         |          | New Holstein                      | 96       | 46    | 65.9                     | 2.70                    |           |                               |          |       |                          |                         |
| Lind                          | 114                           | 45              | 79.3  | 0.69                     |                         |          | New London                        | 95       | 44    | 66.6                     | 3.29                    |           |                               |          |       |                          |                         |
| Loomis†                       | 103                           | 52              | 70.2  | 0.49                     |                         |          | Oconto                            | 95       | 43    | 66.2                     | 3.39                    |           |                               |          |       |                          |                         |
| Madrone†                      | 89                            | 45              | 64.6  | 0.22                     |                         |          | Osceola†                          | 95       | 38    | 65.2                     | 4.24                    |           |                               |          |       |                          |                         |
| Moxee Valley†                 | 105                           | 47              | 74.6  | 0.18                     |                         |          | Pepin                             | 96       | 44    | 69.9                     | 1.98                    |           |                               |          |       |                          |                         |
| New Whatcom                   | 84                            | 44              | 61.8  | 1.03                     |                         |          | Pine River†                       | 93       | 45    | 66.9                     | 4.08                    |           |                               |          |       |                          |                         |
| Northbend                     | 91                            | 40              | 65.2  | 0.42                     |                         |          | Portage†                          | 91       | 44    | 66.2                     | 4.58                    |           |                               |          |       |                          |                         |
| Olga                          | 80                            | 45              | 59.2  | 0.30                     |                         |          | Port Washington                   | 95       | 50    | 69.3                     | 2.74                    |           |                               |          |       |                          |                         |
| Olympia†                      | 99                            | 45              | 65.8  | 0.50                     |                         |          | Prairie du Chien                  | 98       | 48    | 71.6                     | 1.83                    |           |                               |          |       |                          |                         |
| Orcas Island                  | 89                            | 48              | 63.2  | 0.46                     |                         |          | Prentice†                         | 96       | 35    | 61.7                     | 1.66                    |           |                               |          |       |                          |                         |
| Pinehill†                     | 101                           | 47              | 71.4  | 0.01                     |                         |          | Racine                            | 97       | 34    | 70.4                     | 3.20                    |           |                               |          |       |                          |                         |
| Pomeroy                       | 108                           | 54              | 79.6  | 0.23                     |                         |          | Shawano                           | 93       | 44    | 65.5                     | 3.80                    |           |                               |          |       |                          |                         |
| Port Townsend                 | 86                            | 49              | 62.0  | 0.18                     |                         |          | Sheboygan* <sup>10</sup>          | 94       | 50    | 70.3                     | .....                   |           |                               |          |       |                          |                         |
| Pullmant                      | 102                           | 47              | 71.5  | 1.03                     |                         |          | Spooner                           | 99       | 38    | 67.5                     | 1.97                    |           |                               |          |       |                          |                         |
| Rossalla†                     | 101                           | 44              | 69.9  | 1.10                     |                         |          | Stevens Point†                    | 93       | 43    | 66.6                     | 3.23                    |           |                               |          |       |                          |                         |
| Sedro†                        | 94                            | 41              | 65.2  | 0.87                     |                         |          | Sturgeon Bay Canal* <sup>10</sup> | 90       | 52    | 65.8                     | .....                   |           |                               |          |       |                          |                         |
| Shoalwater Bay* <sup>10</sup> | 82                            | 54              | 61.6  | .....                    |                         |          | Two Rivers* <sup>10</sup>         | 93       | 55    | 69.0                     | .....                   |           |                               |          |       |                          |                         |
| Silvana                       | 91                            | 43              | 62.4  | 0.18                     |                         |          | Valley Junction†                  | 92       | 38    | 65.4                     | 2.66                    |           |                               |          |       |                          |                         |
| Snohomish†                    | 91                            | 46              | 66.1  | 0.18                     |                         |          | Viroqua                           | 90       | 49    | 68.0                     | 5.13                    |           |                               |          |       |                          |                         |
| Southbend                     | 95                            | 37              | 61.8  | 0.45                     |                         |          | Watertown†                        | 90       | 48    | 68.4                     | 2.64                    |           |                               |          |       |                          |                         |
| Stampede                      | 96                            | 45              | 66.0  | 1.02                     |                         |          | Waukesha†                         | 91       | 53    | 69.2                     | 4.08                    |           |                               |          |       |                          |                         |
| Sunnyside†                    | 108                           | 50              | 75.0  | 0.07                     |                         |          | Wausau†                           | 93       | 44    | 65.4                     | 3.94                    |           |                               |          |       |                          |                         |
| Union City†                   | 93                            | 47              | 65.1  | 0.31                     |                         |          | Wausaukee                         | 96       | 40    | 64.6                     | 4.20                    |           |                               |          |       |                          |                         |
| Vancouver                     | 97                            | 48              | 66.8  | 0.18                     |                         |          | Westfield†                        | 92       | 48    | 68.6                     | 3.18                    |           |                               |          |       |                          |                         |
| Vashon†                       | 90                            | 50              | 65.0  | 0.38                     |                         |          | Whitehall                         | 93       | 42    | 66.6                     | 3.10                    |           |                               |          |       |                          |                         |
| Waterville                    | 100                           | 48 <sup>b</sup> | 72.2  | 0.91                     |                         |          | White Mound                       | 96       | 42    | 68.4                     | 6.02                    |           |                               |          |       |                          |                         |
| <b>West Virginia.</b>         |                               |                 |       |                          |                         |          | Wyoming.                          |          |       |                          |                         |           |                               |          |       |                          |                         |
| Beckley                       | 91                            | 52              | 68.6  | 5.74                     |                         |          | Basin                             |          |       |                          |                         |           |                               |          |       |                          |                         |
| Beverly†                      | 92                            | 52              | 69.6  | 10.06                    |                         |          | Big Horn Ranch                    | 87       | 36    | 69.6                     | 1.81                    |           |                               |          |       |                          |                         |
| Bluefield                     | 98                            | 51              | 72.6  | 6.15                     |                         |          | Big Piney                         | 84       | 33    | 64.4                     | 0.23                    |           |                               |          |       |                          |                         |
| Buckhannon a†                 |                               |                 |       | 8.96                     |                         |          | Bitter Creek                      | 105      | 93    | 71.4                     | 0.04                    |           |                               |          |       |                          |                         |
| Buckhannon b                  | 92                            | 53              | 73.2  | .....                    |                         |          | Carbon                            | 104      | 37    | 72.0                     | 0.62                    |           |                               |          |       |                          |                         |
| Burlington†                   | 95                            | 52              | 78.2  | 8.21                     |                         |          | Cody                              |          |       |                          | 1.74                    |           |                               |          |       |                          |                         |
| Charleston†                   |                               |                 |       | 7.42                     |                         |          | Embar                             | 96       | 40    | 69.7                     | 1.61                    |           |                               |          |       |                          |                         |
| Dayton†                       | 91                            | 53              | 72.9  | 9.33                     |                         |          | Evanston                          | 88       | 41    | 64.8                     | 0.97                    |           |                               |          |       |                          |                         |
| Eastbank                      | 94                            | 60              | 76.9  | 8.33                     |                         |          | Fort Laramie†                     | 102      | 45    | 73.2                     | 1.13                    |           |                               |          |       |                          |                         |
| Elkhorn†                      | 88                            | 57              | 72.5  | 5.67                     |                         |          | Fort Washakie                     | 90       | 45    | 66.4                     | 0.46                    |           |                               |          |       |                          |                         |
| Fairmont†                     | 88                            | 58              | 78.0  | 7.73                     |                         |          | Fort Yellowstone†                 | 89       | 37    | 63.0                     | 2.05                    |           |                               |          |       |                          |                         |
| Glenville†                    | 91                            | 54              | 72.6  | 6.85                     |                         |          | Greenriver                        | 99       | 40    | 68.1                     | .....                   |           |                               |          |       |                          |                         |
| Grafton†                      | 91                            | 54              | 69.8  | 9.15                     |                         |          | Laramie                           | 86       | 39    | 68.1                     | 1.16                    |           |                               |          |       |                          |                         |
| Green Sulphur                 | 91                            | 56              | 74.3  | 4.40                     |                         |          | Lovell <sup>a</sup>               | 94       | 36    | 67.9</                   |                         |           |                               |          |       |                          |                         |

TABLE III.—Data furnished by the Canadian Meteorological Service, August, 1898.

| Stations.                  | Pressure.         |               |                        | Temperature. |                        |               | Precipitation. |        |                        | Stations.                | Pressure.                 |               |                        | Temperature.  |               |        | Precipitation.         |                |       |        |
|----------------------------|-------------------|---------------|------------------------|--------------|------------------------|---------------|----------------|--------|------------------------|--------------------------|---------------------------|---------------|------------------------|---------------|---------------|--------|------------------------|----------------|-------|--------|
|                            | Mean not reduced. | Mean reduced. | Departure from normal. | Mean.        | Departure from normal. | Mean maximum. | Mean minimum.  | Total. | Departure from normal. | Depth of snow.           | Mean.                     | Mean reduced. | Departure from normal. | Mean maximum. | Mean minimum. | Total. | Departure from normal. | Depth of snow. |       |        |
| St. Johns, N. F.....       | 29.80             | 29.94         | -05                    | 62.3         | + 2.5                  | 69.0          | 55.6           | 4.17   | .....                  | .....                    | Saugeen, Ont.....         | 29.27         | 29.96                  | -02           | 65.7          | + 1.9  | 74.0                   | 57.5           | 2.64  | + 0.86 |
| Sydney, C. B. I.....       | 29.93             | 29.97         | +01                    | 65.0         | + 1.7                  | 72.7          | 57.3           | 3.23   | -0.67                  | .....                    | Parry Sound, Ont.....     | 29.26         | 29.93                  | -04           | 65.3          | + 1.8  | 74.8                   | 55.8           | 2.82  | + 0.14 |
| Halifax, N. S.....         | 29.88             | 30.01         | +03                    | 67.0         | + 3.4                  | 74.1          | 59.9           | 5.66   | +2.10                  | .....                    | Port Arthur, Ont.....     | 29.23         | 29.91                  | -02           | 59.6          | + 0.1  | 69.5                   | 49.6           | 2.42  | + 0.05 |
| Grand Manan, N. B.....     | 29.90             | 29.95         | -01                    | 62.3         | + 0.8                  | 69.4          | 55.4           | 3.61   | -0.52                  | .....                    | Winnipeg, Man.....        | 29.08         | 29.88                  | -03           | 63.0          | + 0.4  | 74.8                   | 51.1           | 2.15  | -1.81  |
| Yarmouth, N. S.....        | 29.91             | 29.98         | -01                    | 61.0         | + 0.8                  | 67.9          | 54.1           | 6.33   | +3.11                  | .....                    | Minnedosa, Man.....       | 28.14         | 29.91                  | +02           | 61.0          | + 1.6  | 72.3                   | 49.7           | 2.56  | + 0.70 |
| Charlottet'N, P. E. I..... | 29.90             | 29.94         | -01                    | 66.4         | + 2.1                  | 71.5          | 61.4           | 4.54   | +1.14                  | .....                    | Qu'Appelle, Assin.....    | 27.68         | 29.88                  | -02           | 61.7          | + 0.2  | 74.4                   | 49.1           | 3.57  | + 2.10 |
| Chatham, N. B.....         | 29.90             | 29.92         | -02                    | 65.0         | + 1.8                  | 74.2          | 55.8           | 3.73   | -0.41                  | .....                    | Medicine Hat, Assin.....  | 27.63         | 29.83                  | -07           | 69.4          | + 3.7  | 83.6                   | 55.2           | 2.22  | + 1.23 |
| Father Point, Que.....     | 29.85             | 29.88         | -03                    | 56.2         | + 0.6                  | 65.3          | 47.0           | 3.11   | +0.55                  | .....                    | Swift Current, Assin..... | 27.39         | 29.88                  | -04           | 65.9          | + 1.9  | 80.4                   | 51.4           | 1.79  | + 0.05 |
| Quebec, Que.....           | 29.59             | 29.91         | -04                    | 64.6         | + 1.5                  | 72.6          | 56.7           | 2.78   | -0.64                  | .....                    | Calgary, Alberta.....     | 27.39         | 29.91                  | .....         | 59.0          | .....  | 74.9                   | 43.0           | 2.37  | .....  |
| Montreal, Que.....         | 29.72             | 29.92         | -03                    | 67.8         | + 1.4                  | 75.3          | 60.2           | 2.56   | +0.39                  | .....                    | Banff, Alberta.....       | 25.39         | 29.91                  | .....         | 59.0          | .....  | 74.9                   | 43.0           | 2.37  | .....  |
| Rockcliffe, Ont.....       | 29.42             | 29.92         | -02                    | 64.4         | + 2.9                  | 74.4          | 54.5           | 4.84   | +1.91                  | .....                    | Edmonton, Alberta.....    | 27.63         | 29.85                  | -06           | 62.9          | + 4.1  | 76.8                   | 48.9           | 0.85  | -0.98  |
| Ottawa, Ont.....           | 29.62             | 29.67         | .....                  | 67.5         | + 2.7                  | 77.5          | 57.5           | 3.22   | .....                  | Prince Albert, Sask..... | 28.34                     | 29.81         | .....                  | 60.0          | + 1.1         | 71.8   | 48.2                   | 1.84           | ..... |        |
| Kingston, Ont.....         | 29.63             | 29.94         | -03                    | 69.3         | + 2.3                  | 76.6          | 62.0           | 3.47   | +1.48                  | .....                    | Battleford, Sask.....     | 28.20         | 29.89                  | .....         | 62.6          | 0.0    | 76.1                   | 49.1           | 1.58  | .....  |
| Toronto, Ont.....          | 29.58             | 29.95         | -04                    | 70.8         | + 4.8                  | 81.8          | 59.8           | 1.08   | -1.50                  | .....                    | Kamloops, B. C.....       | 28.58         | 29.80                  | .....         | 75.8          | .....  | 90.7                   | 60.9           | 0.00  | .....  |
| White River, Ont.....      | 29.64             | 29.97         | -01                    | 55.6         | -0.8                   | 68.2          | 42.9           | 2.70   | -0.86                  | .....                    | Esquimalt, B. C.....      | 30.03         | 30.19                  | +09           | 81.1          | + 1.5  | 87.1                   | 75.2           | 5.71  | .....  |
| Port Stanley, Ont.....     | 29.85             | 29.97         | -03                    | 68.6         | + 2.7                  | 78.1          | 59.1           | 2.26   | -0.13                  | .....                    | Hamilton, Bermuda.....    | 30.03         | 30.19                  | .....         | 81.1          | .....  | 87.1                   | 75.2           | 5.71  | .....  |

TABLE IV.—*Mean temperature for each hour of seventy-fifth meridian time, August, 1898.*

TABLE V.—*Mean pressure for each hour of seventy-fifth meridian time, August, 1898.*

| Stations.            | 1 a. m. | 2 a. m. | 3 a. m. | 4 a. m. | 5 a. m. | 6 a. m. | 7 a. m. | 8 a. m. | 9 a. m. | 10 a. m. | 11 a. m. | Noon. | 1 p. m. | 2 p. m. | 3 p. m. | 4 p. m. | 5 p. m. | 6 p. m. | 7 p. m. | 8 p. m. | 9 p. m. | 10 p. m. | 11 p. m. | Midnight. | Mean. |
|----------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|-----------|-------|
| Bismarck, N. Dak.    | 28.207  | .210    | .211    | .213    | .212    | .214    | .222    | .231    | .234    | .230     | .223     | .213  | .200    | .190    | .178    | .168    | .164    | .161    | .157    | .165    | .179    | .188     | .201     | .206      |       |
| Boston, Mass.        | 29.841  | .838    | .839    | .844    | .849    | .856    | .861    | .864    | .865    | .861     | .856     | .847  | .842    | .834    | .826    | .823    | .822    | .827    | .838    | .844    | .851    | .848     | .845     | .845      |       |
| Buffalo, N. Y.       | 29.159  | .157    | .157    | .157    | .168    | .173    | .178    | .179    | .178    | .178     | .175     | .168  | .165    | .158    | .147    | .140    | .136    | .134    | .130    | .145    | .155    | .157     | .159     | .163      |       |
| Chicago, Ill.        | 29.109  | .105    | .107    | .107    | .117    | .124    | .138    | .146    | .144    | .146     | .151     | .149  | .138    | .127    | .115    | .104    | .094    | .090    | .090    | .091    | .107    | .111     | .117     | .109      |       |
| Cincinnati, Ohio     | 29.357  | .353    | .349    | .350    | .358    | .366    | .378    | .384    | .389    | .392     | .389     | .381  | .368    | .357    | .342    | .335    | .328    | .325    | .326    | .332    | .348    | .357     | .362     | .364      |       |
| Cleveland, Ohio      | 29.189  | .185    | .183    | .179    | .182    | .188    | .193    | .199    | .206    | .213     | .215     | .207  | .200    | .194    | .181    | .170    | .167    | .169    | .169    | .177    | .185    | .190     | .191     | .188      |       |
| Detroit, Mich.       | 29.209  | .203    | .201    | .202    | .203    | .210    | .220    | .227    | .235    | .235     | .232     | .225  | .220    | .211    | .199    | .190    | .186    | .185    | .187    | .191    | .205    | .212     | .215     | .216      |       |
| Dodge, Kans.         |         |         |         |         |         |         |         |         |         |          |          |       |         |         |         |         |         |         |         |         |         |          |          |           |       |
| Eastport, Me.        | 29.856  | .854    | .850    | .854    | .859    | .867    | .870    | .873    | .873    | .872     | .867     | .863  | .858    | .852    | .848    | .846    | .848    | .853    | .862    | .865    | .868    | .861     | .857     | .855      |       |
| Galveston, Tex.      | 29.921  | .917    | .914    | .913    | .915    | .916    | .919    | .920    | .926    | .948     | .956     | .962  | .960    | .947    | .934    | .918    | .904    | .886    | .888    | .890    | .904    | .916     | .923     | .924      |       |
| Havre, Mont.         | 27.308  | .308    | .307    | .311    | .314    | .318    | .324    | .331    | .337    | .338     | .337     | .332  | .324    | .312    | .302    | .289    | .278    | .270    | .268    | .265    | .277    | .284     | .294     | .304      |       |
| Kansas City, Mo.     | 28.995  | .997    | .994    | .998    | .996    | .001    | .006    | .011    | .021    | .025     | .025     | .023  | .011    | .009    | .002    | .001    | .000    | .000    | .000    | .000    | .000    | .000     | .000     | .000      |       |
| Key West, Fla.       | 30.033  | .025    | .017    | .014    | .015    | .023    | .029    | .036    | .041    | .044     | .044     | .039  | .034    | .018    | .007    | .006    | .005    | .005    | .005    | .005    | .005    | .005     | .005     | .005      |       |
| Memphis, Tenn.       | 29.599  | .596    | .598    | .594    | .596    | .603    | .604    | .611    | .631    | .638     | .640     | .643  | .641    | .631    | .617    | .595    | .577    | .569    | .566    | .565    | .570    | .581     | .593     | .601      |       |
| New Orleans, La.     | 29.949  | .943    | .940    | .940    | .941    | .948    | .960    | .970    | .980    | .982     | .985     | .982  | .969    | .956    | .945    | .941    | .925    | .925    | .925    | .930    | .944    | .954     | .957     | .958      |       |
| New York, N. Y.      | 29.675  | .670    | .667    | .668    | .675    | .682    | .693    | .700    | .700    | .700     | .696     | .690  | .679    | .672    | .661    | .658    | .660    | .660    | .663    | .671    | .677    | .683     | .684     | .682      |       |
| Philadelphia, Pa.    | 29.896  | .886    | .883    | .887    | .894    | .903    | .910    | .919    | .922    | .924     | .921     | .915  | .905    | .893    | .881    | .874    | .873    | .874    | .875    | .884    | .896    | .908     | .906     | .904      |       |
| Pittsburg, Pa.       | 29.104  | .104    | .104    | .105    | .106    | .111    | .119    | .142    | .143    | .143     | .137     | .135  | .130    | .124    | .117    | .110    | .109    | .105    | .105    | .106    | .106    | .104     | .107     | .109      |       |
| Portland, Oregon     | 29.776  | .786    | .795    | .797    | .800    | .803    | .803    | .806    | .813    | .820     | .821     | .819  | .814    | .804    | .793    | .779    | .762    | .749    | .740    | .737    | .740    | .751     | .768     | .778      |       |
| St. Louis, Mo.       | 29.403  | .398    | .397    | .399    | .403    | .412    | .425    | .434    | .439    | .445     | .441     | .430  | .420    | .401    | .387    | .377    | .372    | .371    | .377    | .390    | .399    | .405     | .408     | .409      |       |
| St. Paul, Minn.      | 29.050  | .050    | .048    | .052    | .053    | .059    | .073    | .078    | .077    | .077     | .075     | .065  | .058    | .050    | .035    | .031    | .025    | .023    | .020    | .028    | .041    | .042     | .045     | .051      |       |
| Salt Lake City, Utah | 25.640  | .643    | .644    | .646    | .649    | .650    | .657    | .664    | .678    | .685     | .687     | .687  | .680    | .666    | .652    | .638    | .616    | .608    | .599    | .595    | .601    | .609     | .621     | .629      |       |
| San Diego, Cal.      | 29.772  | .782    | .775    | .771    | .765    | .761    | .760    | .765    | .775    | .782     | .789     | .792  | .795    | .786    | .776    | .769    | .756    | .757    | .747    | .742    | .739    | .742     | .751     | .765      |       |
| San Francisco, Cal.  | 29.776  | .778    | .779    | .776    | .770    | .770    | .773    | .777    | .788    | .796     | .804     | .809  | .812    | .806    | .796    | .787    | .771    | .764    | .768    | .774    | .777    | .781     | .789     | .795      |       |
| Savannah, Ga.        | 29.969  | .959    | .952    | .948    | .955    | .966    | .982    | .992    | .000    | .005     | .001     | .995  | .981    | .986    | .954    | .952    | .950    | .951    | .960    | .966    | .979    | .984     | .983     | .978      |       |
| Washington, D. C.    | 29.905  | .901    | .903    | .904    | .912    | .920    | .928    | .935    | .940    | .942     | .938     | .931  | .918    | .903    | .890    | .885    | .884    | .884    | .886    | .895    | .905    | .908     | .909     | .912      |       |

TABLE VI.—Average wind movement for each hour of seventy-fifth meridian time, August, 1898.

| Stations.            | 1 a. m. | 2 a. m. | 3 a. m. | 4 a. m. | 5 a. m. | 6 a. m. | 7 a. m. | 8 a. m. | 9 a. m. | 10 a. m. | 11 a. m. | Noon. | 1 p. m. | 2 p. m. | 3 p. m. | 4 p. m. | 5 p. m. | 6 p. m. | 7 p. m. | 8 p. m. | 9 p. m. | 10 p. m. | 11 p. m. | Midnight. | Mean. |      |
|----------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|-----------|-------|------|
| Abilene, Tex.        | 5.8     | 5.2     | 5.2     | 5.1     | 5.8     | 5.0     | 5.0     | 5.1     | 6.0     | 7.6      | 8.6      | 8.5   | 8.7     | 8.5     | 9.0     | 9.5     | 9.5     | 9.1     | 9.5     | 9.7     | 8.0     | 6.5      | 6.7      | 6.1       | 7.2   |      |
| Albany, N. Y.        | 4.5     | 4.5     | 4.0     | 3.5     | 3.5     | 3.7     | 4.5     | 6.3     | 6.7     | 7.3      | 8.4      | 8.6   | 9.4     | 10.1    | 9.9     | 9.8     | 8.7     | 6.9     | 5.8     | 5.1     | 5.0     | 4.3      | 4.5      | 4.5       | 6.2   |      |
| Alpena, Mich.        | 5.7     | 5.4     | 5.8     | 5.7     | 5.5     | 5.6     | 5.8     | 5.9     | 5.9     | 6.8      | 7.5      | 8.3   | 8.1     | 8.8     | 9.1     | 10.3    | 8.8     | 7.2     | 6.3     | 5.4     | 4.7     | 4.8      | 5.7      | 5.2       | 6.6   |      |
| Amarillo, Tex.       | 12.6    | 12.3    | 12.0    | 11.2    | 11.2    | 11.7    | 12.1    | 11.2    | 10.2    | 11.8     | 13.5     | 13.0  | 12.3    | 11.9    | 11.6    | 12.7    | 13.3    | 14.7    | 16.0    | 14.0    | 12.3    | 12.9     | 13.3     | 13.0      | 12.5  |      |
| Atlanta, Ga.         | 6.3     | 6.0     | 5.3     | 5.4     | 5.5     | 5.4     | 5.2     | 5.4     | 6.2     | 6.5      | 6.7      | 7.2   | 7.2     | 6.9     | 7.3     | 7.6     | 7.4     | 6.6     | 6.4     | 6.3     | 6.4     | 6.3      | 7.5      | 7.1       | 6.4   |      |
| Atlantic City, N. J. | 8.5     | 8.2     | 8.0     | 7.5     | 8.0     | 7.6     | 8.0     | 8.7     | 9.4     | 9.5      | 10.0     | 10.5  | 11.3    | 11.5    | 11.9    | 11.0    | 10.5    | 9.6     | 9.3     | 8.7     | 8.2     | 8.3      | 8.6      | 8.4       | 9.2   |      |
| Augusta, Ga.         | 3.9     | 3.8     | 3.7     | 3.5     | 3.1     | 3.2     | 4.3     | 5.0     | 5.5     | 5.9      | 6.4      | 6.9   | 7.2     | 7.2     | 7.1     | 7.2     | 6.3     | 5.6     | 4.6     | 4.5     | 4.9     | 5.3      |          |           |       |      |
| Baker City, Oreg.    | 2.7     | 3.5     | 4.0     | 5.0     | 6.1     | 7.2     | 8.0     | 8.5     | 8.0     | 6.8      | 5.5      | 4.6   | 3.4     | 4.1     | 5.1     | 6.4     | 7.2     | 6.9     | 6.4     | 4.9     | 3.9     | 3.7      | 3.1      | 5.1       |       |      |
| Baltimore, Md.       | 3.3     | 3.0     | 2.7     | 2.7     | 2.6     | 2.5     | 2.8     | 3.7     | 4.4     | 5.2      | 5.5      | 6.0   | 6.2     | 6.3     | 5.9     | 5.7     | 5.3     | 4.4     | 3.2     | 3.4     | 3.8     | 3.6      | 3.7      | 4.2       |       |      |
| Bismarck, N. Dak.    | 6.7     | 6.2     | 6.0     | 6.1     | 6.2     | 7.0     | 7.4     | 7.2     | 8.1     | 8.8      | 10.0     | 10.7  | 12.3    | 12.0    | 11.6    | 12.0    | 11.6    | 10.5    | 8.3     | 7.9     | 8.6     | 7.6      | 9.0      |           |       |      |
| Block Island, R. I.  | 11.5    | 10.8    | 10.3    | 9.7     | 9.4     | 9.0     | 9.5     | 10.5    | 10.9    | 12.5     | 13.3     | 13.8  | 14.6    | 14.6    | 15.2    | 15.4    | 15.0    | 13.6    | 13.2    | 12.7    | 11.7    | 11.0     | 11.3     | 11.9      | 12.1  |      |
| Boston, Mass.        | 8.8     | 9.0     | 8.2     | 7.9     | 8.3     | 7.3     | 8.2     | 8.5     | 9.1     | 10.0     | 9.9      | 10.5  | 11.0    | 11.6    | 11.5    | 12.3    | 11.0    | 9.8     | 10.0    | 9.3     | 9.5     | 8.7      | 8.4      | 8.5       | 9.5   |      |
| Buffalo, N. Y.       | 11.9    | 12.0    | 11.6    | 11.5    | 11.1    | 10.1    | 10.5    | 10.6    | 11.5    | 12.7     | 14.0     | 14.5  | 15.6    | 15.5    | 15.7    | 14.9    | 15.3    | 14.7    | 13.4    | 12.5    | 11.9    | 12.2     | 11.9     | 11.8      | 12.8  |      |
| Cairo, Ill.          | 3.5     | 3.6     | 4.0     | 3.9     | 3.9     | 3.9     | 4.2     | 4.6     | 4.8     | 5.3      | 5.5      | 5.8   | 5.7     | 5.9     | 6.2     | 6.4     | 6.5     | 5.7     | 4.4     | 4.3     | 3.7     | 4.0      | 4.7      |           |       |      |
| Cape Henry, Va.      | 9.8     | 9.7     | 9.4     | 9.2     | 9.0     | 8.9     | 9.3     | 9.7     | 9.5     | 9.8      | 9.6      | 9.4   | 10.7    | 11.6    | 11.9    | 12.0    | 12.0    | 10.6    | 9.3     | 8.9     | 8.6     | 9.4      | 9.3      | 9.9       |       |      |
| Carson City, Nev.    | 4.8     | 4.1     | 3.0     | 3.0     | 2.2     | 1.9     | 2.2     | 2.2     | 2.0     | 1.5      | 1.5      | 2.9   | 4.0     | 5.8     | 7.4     | 8.8     | 10.8    | 12.8    | 15.2    | 14.7    | 12.6    | 10.8     | 8.5      | 5.6       | 6.2   |      |
| Charleston, S. C.    | 8.1     | 7.8     | 7.8     | 8.2     | 8.3     | 7.7     | 7.8     | 8.1     | 9.8     | 10.5     | 11.3     | 11.7  | 13.2    | 13.8    | 13.8    | 13.6    | 13.8    | 13.8    | 12.4    | 10.3    | 10.1    | 9.7      | 9.2      | 9.1       | 10.3  |      |
| Charlotte, N. C.     | 5.2     | 4.7     | 5.2     | 4.5     | 4.7     | 4.6     | 4.7     | 5.5     | 6.0     | 6.2      | 6.6      | 6.4   | 7.0     | 7.4     | 7.6     | 7.3     | 6.4     | 4.8     | 5.4     | 4.4     | 4.8     | 5.1      | 5.7      | 5.7       |       |      |
| Chattanooga, Tenn.   | 3.1     | 2.8     | 3.0     | 2.9     | 2.6     | 2.5     | 2.6     | 3.2     | 4.3     | 5.1      | 6.0      | 6.5   | 7.3     | 7.6     | 7.7     | 8.3     | 8.8     | 8.2     | 6.5     | 5.2     | 3.6     | 3.4      | 3.9      | 4.9       |       |      |
| Cheyenne, Wyo.       | 7.0     | 6.8     | 6.8     | 6.5     | 6.1     | 6.1     | 6.2     | 6.2     | 6.5     | 7.7      | 8.4      | 8.9   | 9.4     | 9.6     | 9.8     | 9.9     | 9.1     | 8.3     | 8.1     | 7.2     | 7.8     |          |          |           |       |      |
| Chicago, Ill.        | 15.2    | 14.7    | 14.7    | 14.1    | 15.3    | 14.1    | 14.3    | 13.9    | 13.8    | 14.5     | 14.7     | 14.9  | 15.7    | 15.7    | 15.3    | 15.6    | 15.7    | 15.0    | 15.0    | 14.4    | 13.2    | 13.3     | 14.1     | 14.2      | 15.2  | 14.6 |
| Cincinnati, Ohio.    | 3.3     | 3.5     | 3.0     | 3.5     | 3.5     | 3.2     | 3.7     | 3.6     | 4.8     | 6.6      | 7.6      | 8.2   | 8.5     | 8.4     | 8.6     | 8.6     | 8.3     | 7.8     | 6.3     | 4.8     | 4.3     | 3.5      | 3.5      | 5.4       |       |      |
| Cleveland, Ohio.     | 10.5    | 10.5    | 10.0    | 10.6    | 10.9    | 11.0    | 11.0    | 11.1    | 11.1    | 10.8     | 11.0     | 11.2  | 12.4    | 12.9    | 12.7    | 12.3    | 11.1    | 10.2    | 9.0     | 7.9     | 8.6     | 9.5      | 10.5     | 10.8      | 10.7  |      |
| Columbia, Mo.        | 5.2     | 4.9     | 5.0     | 4.6     | 4.7     | 4.9     | 5.0     | 4.8     | 5.2     | 6.1      | 6.9      | 7.5   | 7.4     | 7.6     | 7.8     | 7.5     | 8.0     | 7.2     | 5.9     | 4.8     | 4.6     | 4.8      | 5.2      | 5.2       | 5.8   |      |
| Columbus, Ohio.      | 4.4     | 4.3     | 4.2     | 4.1     | 3.7     | 3.9     | 4.4     | 5.4     | 5.5     | 7.0      | 7.5      | 7.9   | 7.3     | 7.7     | 7.8     | 7.8     | 7.8     | 6.9     | 6.1     | 4.9     | 5.1     | 5.2      | 4.7      | 4.6       | 5.6   |      |
| Concordia, Kans.     | 6.5     | 6.4     | 5.9     | 5.1     | 4.8     | 5.1     | 4.3     | 4.6     | 6.2     | 6.9      | 7.4      | 7.5   | 7.5     | 8.4     | 8.2     | 8.5     | 8.8     | 8.8     | 8.5     | 7.2     | 6.2     | 6.3      | 6.0      | 6.4       | 6.7   |      |
| Corpus Christi, Tex. | 10.5    | 9.4     | 8.0     | 6.9     | 5.6     | 4.7     | 4.0     | 4.1     | 5.4     | 6.7      | 7.8      | 9.3   | 11.6    | 13.1    | 15.5    | 16.2    | 17.4    | 17.7    | 16.4    | 15.3    | 14.5    | 13.4     | 12.9     | 11.8      | 10.8  |      |
| Davenport, Iowa.     | 4.7     | 5.1     | 4.5     | 4.6     | 4.1     | 4.4     | 4.8     | 4.8     | 5.4     | 6.3      | 7.6      | 8.1   | 8.7     | 8.3     | 7.9     | 8.0     | 7.8     | 7.1     | 6.0     | 4.9     | 4.2     | 4.5      | 5.9      |           |       |      |
| Denver, Colo.        | 7.8     | 6.9     | 7.0     | 6.7     | 6.5     | 6.1     | 6.2     | 6.5     | 5.8     | 4.8      | 4.9      | 5.5   | 6.7     | 7.4     | 8.5     | 9.0     | 8.1     | 8.2     | 8.8     | 10.2    | 9.1     | 7.5      | 7.4      | 7.2       |       |      |
| Des Moines, Iowa.    | 3.8     | 3.7     | 3.6     | 3.3     | 2.7     | 3.1     | 3.2     | 3.8     | 4.7     | 5.8      | 6.4      | 6.6   | 7.0     | 7.6     | 7.7     | 8.2     | 8.6     | 8.5     | 7.8     | 6.6     | 4.9     | 3.7      | 3.6      | 3.4       | 5.2   |      |
| Detroit, Mich.       | 5.3     | 5.5     | 5.6     | 5.5     | 5.6     | 5.8     | 5.3     | 5.5     | 5.7     | 6.5      | 7.2      | 7.5   | 8.4     | 8.4     | 8.4     | 8.3     | 7.9     | 7.4     | 6.7     | 6.1     | 5.7     | 5.4      | 5.5      | 5.5       | 6.5   |      |
| Dodge, Kans.         | 8.3     | 8.1     | 7.2     | 7.2     | 7.3     | 6.7     | 6.3     | 8.1     | 10.5    | 11.1     | 12.1     | 12.3  | 12.7    | 13.3    | 13.3    | 13.4    | 13.3    | 13.2    | 12.3    | 10.3    | 9.9     | 9.7      | 9.1      | 10.2      |       |      |
| Dubuque, Iowa.       | 3.8     | 3.6     | 3.8     | 4.3     | 4.1     | 4.1     | 4.2     | 4.9     | 5.7     | 6.1      | 7.0      | 7.5   | 8.1     | 8.2     | 8.0     | 8.5     | 8.5     | 7.8     | 7.0     | 5.8     | 4.9     | 4.5      | 4.6      | 5.8       |       |      |
| Duluth, Minn.        | 9.1     | 7.9     | 8.3     | 9.8     | 9.9     | 9.7     | 8.7     | 7.9     | 8.2     | 8.8      | 8.3      | 9.3   | 9.8     | 9.7     | 9.5     | 8.7     | 8.1     | 7.5     | 7.7     | 8.5     | 9.1     | 9.1      | 8.8      |           |       |      |
| Eastport, Me.        | 5.6     | 5.3     | 4.9     | 4.7     | 4.6     | 4.6     | 4.9     | 5.3     | 5.8     | 6.6      | 7.4      | 8.1   | 8.6     | 8.8     | 8.6     | 7.9     | 7.0     | 6.3     | 5.9     | 5.9     | 6.3     | 6.2      | 6.4      |           |       |      |
| El Paso, Tex.        | 8.1     | 7.5     | 7.7     | 7.8     | 8.7     | 8.6     | 8.5     | 8.7     | 8.5     | 8.8      | 9.0      | 9.2   | 9.4     | 9.2     | 9.1     | 9.4     | 9.3     | 9.1     | 9.6     | 8.7     | 9.2     | 9.0      | 8.0      | 8.7       |       |      |
| Erie, Pa.            | 8.1     | 7.6     | 7.8     | 7.7     | 8.1     | 8.1     | 7.7     | 7.6     | 8.9     | 8.9      | 9.5      | 9.5   | 10.3    | 10.3    | 9.3     | 9.3     | 9.4     | 8.6     | 8.5     | 6.5     | 6.3     | 7.2      | 7.6      | 7.9       |       |      |
| Eureka, Cal.         | 4.5     | 3.5     | 2.9     | 3.5     | 3.0     | 3.1     | 3.4     | 3.9     | 3.4     | 2.9      | 3.5      | 3.7   | 4.1     | 4.1     | 5.5     | 6.1     | 6.8     | 7.7     | 8.2     | 8.6     | 8.2     | 6.1      | 5.0      | 4.9       | 5.0   |      |
| Evansville, Ind.     | 3.3     | 3.5     | 3.4     | 3.1     | 3.2     | 3.3     | 3.5     | 4.0     | 4.7     | 5.5      | 5.8      | 6.1   | 6.5     | 6.3     | 6.4     | 6.8     | 6.3     | 5.8     | 5.2     | 4.0     | 3.9     | 3.1      | 2.9      | 4.6       |       |      |
| Fort Canby, Wash.    | 8.9     | 8.0     | 7.8     | 7.9     | 7.4     | 6.9     | 7.1     | 6.9     | 6.7     | 6.8      | 7.3      | 7.5   | 7.8     | 8.9     | 9.4     | 9.5     | 10.2    | 10.3    | 9.5     | 9.4     | 9.4     | 9.2      | 8.6      | 8.4       | 8.4   |      |
| Fort Smith, Ark.     | 3.6     | 4.4     | 4.0     | 4.6     | 4.2     | 4.2     | 3.8     | 4.4     | 5.2     | 4.9      | 4.6      | 4.6   | 4.5     | 4.5     | 5.4     | 5.4     | 5.4     | 5.4     | 5.4     | 4.9     | 4.1     | 3.7      | 3.8      | 4.5       |       |      |
| Fresno, Cal.         | 8.8     | 8.8     | 8.5     | 8.1     | 7.2     | 6.3     | 5.4     | 5.1     | 4.5     | 4.3      | 4.4      | 4.4   | 4.5     | 4.5     | 4.9     | 4.6     | 4.6     | 5.3     | 5.4     | 5.4     | 5.9     | 6.0      | 6.3      | 6.9       | 8.1   |      |
| Galveston, Tex.      | 4.5     | 4.5     | 4.5     | 4.5     | 4.2     | 4.1     | 4.4     | 4.5     | 4.9     | 5.0      | 5.5      | 5.6   | 5.6     | 6.2     | 5.9     | 5.9     | 6.1     | 6.8     | 5.0     | 4.8     | 4.5     | 4.6      | 5.0      |           |       |      |
| Grand Haven, Mich.   | 6.7     | 6.9     | 6.6     | 6.4     | 6.1     | 6.0     | 6.1     | 6.3     | 7.2     | 8.5      | 8.5      | 9.2   | 10.0    | 10.6    | 10.7    | 10.3    | 9.5     | 8.4     | 7.1     | 6.2     | 5.7     | 6.9      | 6.9      | 7.6       |       |      |
| Green Bay, Wis.      | 4.5     | 4.3     | 4.5     | 4.4     | 4.1     | 4.0     | 4.1     | 4.3     | 5.5     | 6.5      | 6.8      | 7.1   | 7.6     | 7.7     | 7.3     | 7.5     | 7.5     | 6.1     | 5.3     | 5.5     | 5.3     | 5.5      | 5.2      | 5.8       |       |      |
| Hannibal, Mo.        | 5.8     | 6.2     | 6.3     | 6.3     | 5.7     | 5.9     | 5.8     | 6.9     | 8.3     | 8.8      | 10.0     | 9.8   | 9.7     | 10.3    | 10.5    | 10.6    | 9.4     | 7.6     | 5.7     | 5.9     | 5.8     | 6.0      | 7.4      |           |       |      |
| Harrisburg, Pa.      | 3.0     | 3.2     | 3.0     | 3.0     | 3.5     | 3.2     | 3.6     | 4.2     | 5.0     | 5.2      | 6.0      | 6.0   | 6.3     | 6.6     | 6.3     | 6.8     | 6.6     | 5.8     | 4.9     | 4.5     | 4.2     | 4.0      | 3.6      | 4.9       |       |      |
| Hatteras, N. C.      | 9.5     | 9.4     | 9.0     | 9.1     | 8.4     | 8.1     | 8.0     | 8.4     | 9.7     | 9.4      | 9.9      | 9.7   | 10.8    | 11.4    | 11.6    | 12.3    | 11.4    | 10.9    | 10.2    | 10.3    | 9.5     | 9.3      | 9.8      |           |       |      |
| Havre, Mont.         | 6.6     | 6.7     | 6.6     | 6.5     | 6.5     | 6.5     | 6.4     | 6.1     | 6.2     | 7.6      | 8.1      | 8.7   | 9.9     | 9.4     | 9.3     | 9.8</td |         |         |         |         |         |          |          |           |       |      |

TABLE VI.—*Average wind movement, etc.—Continued.*

| Stations.                   | Average wind movement, etc. |         |         |         |         |         |         |         |         |          |       |         | Wind direction. |         |         |         |         |         |         |         |          |          |           |       |      |
|-----------------------------|-----------------------------|---------|---------|---------|---------|---------|---------|---------|---------|----------|-------|---------|-----------------|---------|---------|---------|---------|---------|---------|---------|----------|----------|-----------|-------|------|
|                             | 1 a. m.                     | 2 a. m. | 3 a. m. | 4 a. m. | 5 a. m. | 6 a. m. | 7 a. m. | 8 a. m. | 9 a. m. | 10 a. m. | Noon. | 1 p. m. | 2 p. m.         | 3 p. m. | 4 p. m. | 5 p. m. | 6 p. m. | 7 p. m. | 8 p. m. | 9 p. m. | 10 p. m. | 11 p. m. | Midnight. | Mean. |      |
| Omaha, Nebr.....            | 6.2                         | 5.6     | 5.2     | 5.2     | 4.6     | 4.6     | 4.6     | 4.7     | 5.3     | 6.2      | 6.9   | 7.2     | 8.5             | 9.3     | 9.8     | 9.9     | 10.0    | 9.3     | 8.2     | 6.9     | 6.2      | 6.0      | 6.6       | 6.2   | 6.8  |
| Oswego, N. Y.....           | 8.2                         | 8.4     | 8.5     | 8.2     | 8.1     | 7.9     | 8.1     | 8.3     | 9.0     | 9.0      | 10.1  | 10.3    | 10.0            | 9.7     | 8.5     | 8.8     | 8.6     | 6.4     | 6.7     | 7.3     | 7.7      | 7.4      | 7.8       | 8.4   |      |
| Palestine, Tex.....         | 3.9                         | 3.2     | 3.1     | 2.9     | 2.5     | 2.5     | 2.5     | 2.5     | 4.1     | 5.4      | 5.5   | 5.9     | 6.1             | 6.6     | 6.8     | 6.9     | 6.7     | 6.2     | 4.7     | 3.9     | 3.8      | 3.8      | 3.9       | 3.9   |      |
| Parkersburg, W. Va.....     | 2.8                         | 2.7     | 2.7     | 2.6     | 2.6     | 2.6     | 2.9     | 3.4     | 4.0     | 4.9      | 5.0   | 5.2     | 5.9             | 6.5     | 6.7     | 5.8     | 5.3     | 4.3     | 3.7     | 3.5     | 3.0      | 3.1      | 2.9       | 2.8   |      |
| Pensacola, Fla.....         | 7.1                         | 7.1     | 6.9     | 6.8     | 6.6     | 6.9     | 7.3     | 6.8     | 7.7     | 8.0      | 8.3   | 8.6     | 9.2             | 10.0    | 9.9     | 9.6     | 9.9     | 8.3     | 7.3     | 5.8     | 6.5      | 6.5      | 6.5       | 7.7   |      |
| Philadelphia, Pa.....       | 7.1                         | 7.0     | 6.9     | 7.0     | 6.4     | 6.2     | 6.8     | 7.4     | 8.2     | 8.7      | 9.4   | 9.9     | 10.8            | 10.6    | 11.8    | 11.1    | 10.6    | 9.7     | 7.9     | 7.7     | 7.4      | 7.2      | 6.5       | 7.1   | 8.3  |
| Phenix, Ariz.....           | 5.1                         | 4.5     | 5.1     | 4.6     | 4.5     | 4.3     | 3.8     | 3.8     | 3.4     | 3.1      | 3.8   | 4.4     | 4.3             | 4.7     | 5.1     | 5.8     | 5.5     | 5.1     | 5.3     | 5.5     | 4.8      | 4.9      | 4.5       | 5.2   | 4.6  |
| Pierre, S. Dak.....         | 7.7                         | 7.5     | 6.6     | 6.5     | 6.1     | 5.8     | 5.9     | 5.9     | 6.7     | 7.7      | 9.0   | 9.5     | 10.5            | 10.5    | 10.6    | 10.7    | 10.7    | 10.0    | 9.7     | 9.3     | 9.0      | 8.8      | 8.6       | 8.4   |      |
| Pittsburg, Pa.....          | 8.4                         | 8.6     | 8.2     | 8.5     | 8.4     | 8.5     | 8.8     | 4.5     | 4.7     | 5.6      | 5.8   | 6.1     | 6.6             | 6.8     | 6.3     | 6.7     | 5.5     | 4.7     | 4.3     | 4.0     | 4.1      | 4.0      | 4.1       | 4.8   |      |
| Point Reyes Lt., Cal.....   | 22.8                        | 22.4    | 22.0    | 22.0    | 21.6    | 20.9    | 21.3    | 21.1    | 19.9    | 19.2     | 17.6  | 16.7    | 16.5            | 16.9    | 16.9    | 17.1    | 17.4    | 18.6    | 20.0    | 21.4    | 22.7     | 25.1     | 25.3      | 24.2  | 20.4 |
| Port Angeles, Wash.....     | 4.8                         | 4.6     | 4.9     | 4.7     | 4.0     | 4.1     | 3.9     | 4.2     | 3.6     | 3.4      | 3.7   | 4.8     | 6.5             | 7.1     | 7.9     | 8.4     | 8.6     | 9.5     | 10.6    | 10.1    | 9.1      | 7.6      | 6.0       | 5.5   | 6.2  |
| Port Huron, Mich.....       | 6.7                         | 7.1     | 7.3     | 7.1     | 7.0     | 6.8     | 6.1     | 5.5     | 6.8     | 8.7      | 9.6   | 10.1    | 10.1            | 10.8    | 11.3    | 12.0    | 11.9    | 11.6    | 9.7     | 8.4     | 6.6      | 6.5      | 6.7       | 8.4   |      |
| Portland, Me.....           | 4.4                         | 4.1     | 4.0     | 4.2     | 4.1     | 4.3     | 4.5     | 5.6     | 5.5     | 6.3      | 7.6   | 7.8     | 8.4             | 9.0     | 9.2     | 9.0     | 8.4     | 7.1     | 5.4     | 4.8     | 4.6      | 4.4      | 4.0       | 5.9   |      |
| Portland, Oreg.....         | 9.1                         | 7.5     | 6.7     | 6.5     | 5.4     | 4.5     | 4.2     | 3.7     | 3.8     | 4.7      | 6.2   | 6.6     | 6.8             | 7.1     | 6.8     | 6.8     | 7.2     | 7.8     | 8.0     | 9.3     | 9.2      | 9.9      | 9.8       | 7.0   |      |
| Pueblo, Colo.....           | 5.8                         | 4.7     | 4.6     | 4.7     | 4.8     | 4.2     | 4.0     | 3.8     | 3.2     | 2.8      | 5.0   | 5.7     | 6.9             | 7.9     | 8.9     | 9.2     | 10.0    | 10.8    | 11.5    | 10.9    | 8.5      | 7.5      | 7.0       | 6.6   |      |
| Raleigh, N. C.....          | 4.2                         | 4.1     | 3.9     | 8.7     | 3.5     | 3.5     | 3.7     | 4.5     | 5.4     | 5.8      | 6.1   | 5.9     | 6.2             | 6.6     | 7.1     | 7.4     | 7.3     | 6.5     | 5.0     | 4.4     | 4.2      | 4.1      | 3.9       | 5.1   |      |
| Rapid City, S. Dak.....     | 6.9                         | 7.0     | 6.0     | 5.7     | 5.4     | 5.1     | 5.6     | 5.6     | 5.1     | 5.7      | 6.7   | 8.2     | 9.4             | 9.9     | 10.3    | 10.9    | 9.9     | 8.6     | 8.4     | 8.5     | 7.1      | 6.8      | 7.1       | 7.4   |      |
| Red Bluff, Cal.....         | 5.0                         | 5.0     | 4.1     | 4.3     | 4.0     | 4.9     | 3.9     | 3.7     | 3.2     | 3.8      | 3.1   | 3.6     | 4.0             | 3.9     | 3.9     | 4.4     | 5.1     | 6.0     | 6.1     | 6.2     | 6.3      | 5.2      | 4.8       | 5.0   | 4.6  |
| Richmond, Va.....           | 4.4                         | 4.2     | 4.1     | 3.8     | 3.5     | 3.5     | 3.6     | 4.1     | 5.1     | 6.3      | 7.3   | 7.5     | 7.9             | 8.3     | 8.5     | 8.7     | 8.8     | 8.3     | 7.4     | 6.5     | 5.3      | 4.9      | 4.8       | 4.4   | 5.9  |
| Rochester, N. Y.....        | 5.1                         | 5.6     | 5.6     | 5.2     | 5.0     | 5.0     | 6.0     | 7.1     | 7.6     | 8.2      | 8.7   | 8.6     | 9.3             | 9.4     | 9.3     | 8.8     | 7.5     | 5.9     | 5.3     | 5.7     | 5.7      | 5.6      | 5.6       | 6.7   |      |
| Roseburg, Oreg.....         | 2.0                         | 1.6     | 1.6     | 1.3     | 1.3     | 1.2     | 1.2     | 1.6     | 1.4     | 1.5      | 1.7   | 2.3     | 2.5             | 3.2     | 3.5     | 4.6     | 5.5     | 6.5     | 7.2     | 7.7     | 7.6      | 6.5      | 4.8       | 3.0   | 3.4  |
| Sacramento, Cal.....        | 9.9                         | 10.2    | 10.8    | 11.0    | 11.3    | 10.4    | 9.9     | 9.2     | 8.8     | 7.5      | 7.4   | 7.4     | 6.9             | 7.1     | 7.7     | 8.1     | 8.7     | 9.3     | 10.7    | 11.1    | 11.5     | 11.2     | 10.9      | 9.5   |      |
| St. Louis, Mo.....          | 5.4                         | 6.0     | 6.3     | 6.1     | 5.9     | 6.4     | 6.1     | 6.3     | 6.9     | 7.3      | 7.6   | 7.8     | 8.5             | 8.4     | 8.5     | 8.6     | 8.8     | 8.5     | 8.3     | 8.9     | 5.9      | 5.8      | 6.1       | 5.7   | 7.0  |
| St. Paul, Minn.....         | 4.2                         | 4.2     | 4.1     | 3.9     | 4.2     | 4.0     | 4.8     | 4.5     | 5.5     | 6.0      | 7.2   | 8.0     | 8.2             | 8.2     | 8.5     | 8.6     | 8.6     | 7.9     | 7.0     | 5.7     | 5.0      | 4.0      | 4.4       | 4.3   | 5.9  |
| Salt Lake City, Utah.....   | 5.2                         | 5.3     | 5.8     | 5.0     | 4.4     | 4.5     | 4.6     | 4.4     | 4.9     | 6.7      | 9.3   | 9.7     | 9.2             | 8.6     | 7.1     | 6.0     | 5.4     | 5.4     | 6.1     | 5.9     | 5.7      | 6.0      | 6.0       | 6.0   |      |
| San Antonio, Tex.....       | 7.8                         | 5.7     | 5.0     | 4.2     | 4.2     | 3.9     | 4.1     | 4.0     | 5.8     | 6.7      | 6.9   | 6.5     | 6.7             | 7.5     | 8.2     | 7.9     | 9.6     | 10.6    | 9.8     | 10.4    | 10.3     | 10.4     | 9.0       | 7.3   |      |
| San Diego, Cal.....         | 2.6                         | 2.5     | 1.9     | 2.0     | 1.9     | 1.9     | 2.4     | 2.1     | 2.0     | 2.1      | 3.1   | 4.4     | 6.8             | 8.8     | 10.1    | 10.1    | 10.1    | 9.9     | 9.7     | 8.6     | 7.5      | 6.0      | 4.4       | 3.6   | 5.2  |
| Sandusky, Ohio.....         | 5.7                         | 5.7     | 5.8     | 6.0     | 6.4     | 6.3     | 6.2     | 6.8     | 6.8     | 6.9      | 7.5   | 7.0     | 7.2             | 7.5     | 7.2     | 7.3     | 6.5     | 5.7     | 4.8     | 4.5     | 5.1      | 5.5      | 5.9       | 6.2   |      |
| San Francisco, Cal.....     | 13.6                        | 12.8    | 11.4    | 10.6    | 10.8    | 9.6     | 9.7     | 9.2     | 8.8     | 8.5      | 9.2   | 10.0    | 11.5            | 13.6    | 16.5    | 19.4    | 21.2    | 23.1    | 24.2    | 22.6    | 21.8     | 19.5     | 17.4      | 14.6  |      |
| San Luis Obispo, Cal.....   | 2.6                         | 2.5     | 2.2     | 2.0     | 1.9     | 2.2     | 2.2     | 2.1     | 2.5     | 2.5      | 2.6   | 3.1     | 4.2             | 5.2     | 5.0     | 6.0     | 7.0     | 6.5     | 6.7     | 6.3     | 5.8      | 4.6      | 3.6       | 3.3   |      |
| Santa Fe, N. Mex.....       | 6.0                         | 5.2     | 4.5     | 3.9     | 3.5     | 3.2     | 3.0     | 2.8     | 2.6     | 4.1      | 5.5   | 5.5     | 6.4             | 6.5     | 6.5     | 6.9     | 8.1     | 8.2     | 7.6     | 8.3     | 8.1      | 7.2      | 7.1       | 5.8   |      |
| Sault Ste. Marie, Mich..... | 5.3                         | 5.1     | 4.9     | 4.7     | 4.2     | 5.0     | 5.0     | 4.5     | 5.0     | 5.6      | 7.1   | 8.3     | 9.3             | 9.8     | 10.3    | 10.2    | 10.8    | 9.7     | 8.2     | 7.2     | 6.6      | 5.9      | 4.9       | 6.8   |      |
| Savannah, Ga.....           | 6.1                         | 6.4     | 6.4     | 6.1     | 6.1     | 5.9     | 5.5     | 6.2     | 7.4     | 8.3      | 8.7   | 8.5     | 9.4             | 11.1    | 10.7    | 10.9    | 9.5     | 9.1     | 7.3     | 6.8     | 6.5      | 6.5      | 6.5       | 6.6   |      |
| Seattle, Wash.....          | 3.0                         | 2.9     | 2.7     | 2.5     | 2.8     | 2.8     | 2.7     | 2.8     | 2.7     | 2.8      | 3.2   | 3.5     | 4.5             | 5.1     | 5.2     | 5.1     | 5.3     | 5.0     | 5.7     | 5.7     | 4.6      | 4.6      | 3.9       | 3.4   |      |
| Shreveport, La.....         | 4.0                         | 3.3     | 3.7     | 3.3     | 3.2     | 3.2     | 3.1     | 3.1     | 3.9     | 4.6      | 4.8   | 5.5     | 6.2             | 7.0     | 6.5     | 6.7     | 6.3     | 5.4     | 4.4     | 3.9     | 3.8      | 3.9      | 3.8       | 4.6   |      |
| Sioux City, Iowa.....       | 9.8                         | 9.1     | 8.6     | 9.1     | 8.7     | 8.8     | 8.8     | 9.1     | 9.2     | 9.9      | 10.6  | 11.6    | 12.7            | 13.0    | 13.3    | 13.0    | 12.8    | 12.2    | 11.1    | 9.4     | 9.2      | 9.5      | 9.1       | 10.0  | 10.4 |
| Spokane, Wash.....          | 3.4                         | 3.0     | 2.8     | 2.4     | 2.9     | 2.9     | 2.8     | 3.5     | 3.4     | 3.8      | 4.7   | 5.2     | 5.9             | 6.3     | 6.0     | 6.0     | 6.5     | 6.5     | 6.4     | 6.6     | 5.0      | 4.2      | 3.9       | 4.6   |      |
| Springfield, Ill.....       | 5.3                         | 5.0     | 5.2     | 5.0     | 4.8     | 5.0     | 4.8     | 4.9     | 5.3     | 6.1      | 6.5   | 7.3     | 7.5             | 7.6     | 8.0     | 7.9     | 7.5     | 7.2     | 5.6     | 4.6     | 4.5      | 4.9      | 4.9       | 5.8   |      |
| Springfield, Mo.....        | 6.8                         | 6.4     | 6.4     | 6.8     | 6.4     | 6.5     | 6.1     | 6.0     | 5.9     | 7.0      | 7.6   | 7.6     | 7.5             | 7.8     | 7.3     | 7.2     | 6.8     | 5.8     | 5.4     | 5.8     | 6.6      | 6.9      | 6.7       |       |      |
| Tacoma, Wash.....           | 4.2                         | 3.8     | 3.0     | 3.0     | 2.9     | 2.9     | 2.5     | 2.5     | 2.7     | 3.0      | 3.6   | 3.6     | 4.4             | 4.9     | 5.5     | 5.6     | 6.2     | 6.2     | 5.8     | 5.6     | 5.4      | 4.8      | 5.5       | 5.3   |      |
| Tampa, Fla.....             | 4.9                         | 4.8     | 4.7     | 4.5     | 4.6     | 4.6     | 4.3     | 5.0     | 6.0     | 7.4      | 7.5   | 7.5     | 6.4             | 7.2     | 7.3     | 8.1     | 7.8     | 7.5     | 6.3     | 5.6     | 4.6      | 4.8      | 4.2       | 4.4   | 5.8  |
| Toledo, Ohio.....           | 6.5                         | 6.7     | 6.6     | 6.3     | 6.7     | 6.4     | 6.7     | 7.6     | 7.4     | 8.3      | 8.8   | 9.6     | 10.3            | 10.0    | 9.8     | 10.0    | 9.5     | 8.2     | 7.1     | 6.4     | 6.5      | 6.4      | 6.3       | 7.7   |      |
| Vicksburg, Miss.....        | 4.8                         | 4.9     | 4.3     | 4.1     | 3.8     | 3.7     | 3.8     | 3.9     | 3.9     | 4.5      | 4.8   | 4.9     | 5.5             | 5.7     | 5.8     | 5.8     | 5.1     | 4.5     | 4.5     | 4.5     | 4.2      | 4.5      | 4.4       | 4.7   |      |
| Vineyard Haven, Mass.....   | 7.0                         | 6.3     | 5.8     | 6.1     | 5.8     | 5.4     | 5.5     | 6.9     | 7.6     | 7.6      | 8.2   | 8.8     | 9.2             | 9.7     | 9.6     | 9.8     | 8.6     | 8.2     | 7.3     | 7.0     | 6.6      | 6.5      | 6.5       | 7.4   |      |
| Walla Walla, Wash.....      | 6.1                         | 5.2     | 4.9     | 5.1     | 5.0     | 5.0     | 5.3     | 5.5     | 5.0     | 4.2      | 4.4   | 5.3     | 6.0             | 6.2     | 5.6     | 5.7     | 5.8     | 5.6     | 5.3     | 4.6     | 4.3      | 4.9      | 5.5       | 5.8   |      |
| Washington, D. C.....       | 8.0                         | 8.1     | 2.8     | 2.9     | 2.7     | 2.9     | 3.2     | 4.5     | 5.3     | 5.7      | 6.2   | 7.0     | 7.8             | 7.9     | 8.3     | 7.7     | 6.9     | 6.4     | 4.5     | 3.7     | 3.3      | 3.3      | 3.4       | 3.1   | 4.8  |
| Wichita, Kans.....          | 5.8                         | 5.5     | 5.5     | 5.0     | 5.3     | 5.5     | 5.1     | 5.6     | 6.2     | 6.9      | 7.4   | 8.0     | 8.7             | 8.8     | 9.0     | 9.0     | 8.7     | 7.9     | 7.0     | 5.7     | 5.3      | 6.4      | 6.1       | 6.7   |      |
| Williston, N. Dak.....      | 5.8                         | 5.9     | 5.7     | 5.6     | 4.9     | 4.3     | 5.1     | 5.1     | 6.3     | 6.7      | 7.5   | 8.5     | 9.9             | 10.5    | 10.4    | 10.7    | 11.3    | 10.7    | 11.3    | 10.4    | 8.6      | 8.4      | 7.5       | 6.1   | 7.8  |
| Wilmington, N. C.....       | 5.5                         | 4.8     | 4.6     | 4.4     | 4.5     | 4.5     | 4.8     | 6.0     | 7.0     | 7.6      | 8.8   | 9.1     | 9.3             | 10.0    | 10.4    | 10.4    | 9.      |         |         |         |          |          |           |       |      |

TABLE VII.—Resultant winds from observations at 8 a. m. and 8 p. m., daily, during the month of August, 1898.

| Stations.                         | Component direction from— |        |        |        | Resultant.      |           | Stations.                           | Component direction from— |        |        |        | Resultant.      |           |  |  |  |  |  |
|-----------------------------------|---------------------------|--------|--------|--------|-----------------|-----------|-------------------------------------|---------------------------|--------|--------|--------|-----------------|-----------|--|--|--|--|--|
|                                   | N.                        | S.     | E.     | W.     | Direction from— | Duration. |                                     | N.                        | S.     | E.     | W.     | Direction from— | Duration. |  |  |  |  |  |
| <i>New England.</i>               |                           |        |        |        |                 |           |                                     |                           |        |        |        |                 |           |  |  |  |  |  |
| Eastport, Me.                     | Hours.                    | Hours. | Hours. | Hours. | o               | Hours.    | Upper Lake Region—Cont'd.           | Hours.                    | Hours. | Hours. | Hours. | o               | Hours.    |  |  |  |  |  |
| Portland, Me.                     | 15                        | 23     | 18     | 20     | s. 41 w.        | 11        | Green Bay, Wis.                     | 20                        | 24     | 19     | 15     | s. 45 e.        | 6         |  |  |  |  |  |
| Northfield, Vt.                   | 12                        | 25     | 5      | 31     | s. 63 w.        | 29        | Duluth, Minn.                       | 31                        | 7      | 23     | 19     | n. 7 e.         | 24        |  |  |  |  |  |
| Boston, Mass.                     | 8                         | 44     | 4      | 18     | s. 14 w.        | 37        | <i>North Dakota.</i>                |                           |        |        |        |                 |           |  |  |  |  |  |
| Nantucket, Mass.                  | 12                        | 20     | 6      | 36     | s. 75 w.        | 31        | Moorhead, Minn.                     | 25                        | 17     | 23     | 18     | n. 32 e.        | 9         |  |  |  |  |  |
| Woods Hole, Mass.*                | 7                         | 30     | 5      | 36     | s. 34 w.        | 39        | Bismarck, N. Dak.                   | 23                        | 13     | 25     | 13     | n. 50 e.        | 16        |  |  |  |  |  |
| Block Island, R. I.               | 9                         | 28     | 12     | 34     | s. 49 w.        | 29        | Williston, N. Dak.                  | 28                        | 20     | 18     | 9      | n. 48 e.        | 12        |  |  |  |  |  |
| New Haven Conn.                   | 17                        | 23     | 7      | 27     | s. 78 w.        | 21        | <i>Upper Mississippi Valley.</i>    |                           |        |        |        |                 |           |  |  |  |  |  |
| <i>Middle Atlantic States.</i>    |                           |        |        |        |                 |           |                                     |                           |        |        |        |                 |           |  |  |  |  |  |
| Albany, N. Y.                     | 18                        | 35     | 8      | 14     | s. 15 w.        | 23        | St. Paul, Minn.                     | 26                        | 21     | 18     | 19     | n. 50 w.        | 8         |  |  |  |  |  |
| Binghamton, N. Y.†                | 12                        | 8      | 10     | 13     | n. 37 w.        | 50        | La Crosse, Wis. †                   | 6                         | 18     | 4      | 5      | s. 5 w.         | 12        |  |  |  |  |  |
| New York, N. Y.                   | 12                        | 25     | 13     | 25     | s. 43 w.        | 18        | Davenport, Iowa                     | 16                        | 19     | 22     | 19     | s. 45 e.        | 4         |  |  |  |  |  |
| Harrisburg, Pa.†                  | 7                         | 7      | 5      | 18     | w.              | 13        | Des Moines, Iowa                    | 19                        | 24     | 18     | 16     | s. 22 e.        | 5         |  |  |  |  |  |
| Philadelphia, Pa.                 | 11                        | 26     | 11     | 25     | s. 47 w.        | 20        | Dubuque, Iowa                       | 19                        | 24     | 16     | 19     | s. 31 w.        | 6         |  |  |  |  |  |
| Atlantic City, N. J.              | 9                         | 27     | 9      | 34     | s. 54 w.        | 31        | Keokuk, Iowa                        | 14                        | 25     | 12     | 26     | s. 52 w.        | 18        |  |  |  |  |  |
| Cape May, N. J.                   | 10                        | 38     | 9      | 14     | s. 10 w.        | 28        | Cairo, Ill.                         | 19                        | 28     | 10     | 18     | s. 42 w.        | 12        |  |  |  |  |  |
| Baltimore, Md.                    | 13                        | 30     | 16     | 23     | s. 22 w.        | 18        | Springfield, Ill.                   | 12                        | 23     | 15     | 24     | s. 42 w.        | 14        |  |  |  |  |  |
| Washington, D. C.                 | 15                        | 32     | 7      | 19     | s. 35 w.        | 21        | Hannibal, Mo.†                      | 4                         | 15     | 8      | 12     | s. 20 w.        | 12        |  |  |  |  |  |
| Lynchburg, Va.                    | 12                        | 28     | 16     | 23     | s. 24 w.        | 18        | St. Louis, Mo.                      | 13                        | 32     | 13     | 16     | s. 9 w.         | 19        |  |  |  |  |  |
| Norfolk, Va.                      | 5                         | 38     | 12     | 23     | s. 17 w.        | 34        | <i>Missouri Valley.</i>             |                           |        |        |        |                 |           |  |  |  |  |  |
| Richmond, Va.                     | 14                        | 34     | 15     | 9      | s. 17 e.        | 21        | Columbia, Mo. *                     | 5                         | 15     | 7      | 12     | s. 27 w.        | 11        |  |  |  |  |  |
| <i>South Atlantic States.</i>     |                           |        |        |        |                 |           |                                     |                           |        |        |        |                 |           |  |  |  |  |  |
| Charlotte, N. C.                  | 7                         | 37     | 19     | 13     | s. 11 e.        | 31        | Kansas City, Mo.                    | 13                        | 34     | 20     | 12     | s. 21 e.        | 29        |  |  |  |  |  |
| Hatteras, N. C.                   | 4                         | 40     | 18     | 16     | s. 5 w.         | 36        | Springfield, Mo.                    | 15                        | 33     | 22     | 10     | s. 34 e.        | 18        |  |  |  |  |  |
| Raleigh, N. C.                    | 7                         | 34     | 11     | 24     | s. 26 w.        | 30        | Lincoln, Nebr.                      | 13                        | 26     | 23     | 11     | s. 43 e.        | 18        |  |  |  |  |  |
| Wilmington, N. C.                 | 9                         | 31     | 16     | 25     | s. 22 w.        | 24        | Omaha, Nebr.                        | 23                        | 25     | 19     | 9      | n. 79 e.        | 10        |  |  |  |  |  |
| Charleston, S. C.                 | 12                        | 27     | 18     | 12     | s. 22 e.        | 16        | Sioux City, Iowa†                   | 12                        | 11     | 10     | 5      | s. 79 e.        | 5         |  |  |  |  |  |
| Augusta, Ga.                      | 9                         | 38     | 17     | 11     | s. 12 e.        | 30        | Pierre, S. Dak.                     | 19                        | 23     | 26     | 10     | s. 76 e.        | 16        |  |  |  |  |  |
| Savannah, Ga.                     | 14                        | 30     | 20     | 12     | s. 27 e.        | 18        | Huron, S. Dak.                      | 18                        | 24     | 19     | 13     | s. 45 e.        | 8         |  |  |  |  |  |
| Jacksonville, Fla.                | 9                         | 36     | 25     | 6      | s. 35 e.        | 33        | Yankton, S. Dak.†                   | 12                        | 6      | 12     | 8      | n. 84 e.        | 7         |  |  |  |  |  |
| <i>Florida Peninsula.</i>         |                           |        |        |        |                 |           |                                     |                           |        |        |        |                 |           |  |  |  |  |  |
| Jupiter, Fla.                     | 4                         | 32     | 32     | 7      | s. 41 e.        | 38        | Havre, Mont.                        | 22                        | 7      | 20     | 27     | n. 25 w.        | 17        |  |  |  |  |  |
| Key West, Fla.                    | 4                         | 22     | 41     | 2      | s. 65 e.        | 43        | Miles City, Mont.                   | 28                        | 13     | 14     | 16     | n. 8 w.         | 15        |  |  |  |  |  |
| Tampa, Fla.                       | 14                        | 17     | 24     | 11     | s. 77 e.        | 13        | Helena, Mont.                       | 11                        | 25     | 11     | 34     | s. 59 w.        | 27        |  |  |  |  |  |
| <i>Eastern Gulf States.</i>       |                           |        |        |        |                 |           |                                     |                           |        |        |        |                 |           |  |  |  |  |  |
| Atlanta, Ga.                      | 14                        | 27     | 27     | 10     | s. 52 e.        | 22        | Rapid City, S. Dak.                 | 18                        | 12     | 16     | 31     | s. 68 w.        | 16        |  |  |  |  |  |
| Pensacola, Fla.                   | 17                        | 23     | 19     | 23     | s. 39 w.        | 6         | Cheyenne, Wyo.                      | 29                        | 15     | 8      | 23     | n. 47 w.        | 20        |  |  |  |  |  |
| Mobile, Ala.                      | 22                        | 21     | 17     | 12     | n. 79 e.        | 5         | Lander, Wyo.                        | 12                        | 25     | 15     | 27     | s. 43 w.        | 18        |  |  |  |  |  |
| Montgomery, Ala.                  | 9                         | 31     | 23     | 10     | s. 39 e.        | 28        | North Platte, Nebr.                 | 18                        | 29     | 20     | 10     | s. 42 e.        | 15        |  |  |  |  |  |
| Vicksburg, Miss.                  | 28                        | 15     | 23     | 7      | s. 59 e.        | 25        | <i>Middle Slope.</i>                |                           |        |        |        |                 |           |  |  |  |  |  |
| New Orleans, La.                  | 14                        | 29     | 20     | 16     | s. 15 e.        | 16        | Denver, Colo.                       | 18                        | 85     | 10     | 13     | s. 10 w.        | 17        |  |  |  |  |  |
| <i>Western Gulf States.</i>       |                           |        |        |        |                 |           |                                     |                           |        |        |        |                 |           |  |  |  |  |  |
| Shreveport, La.                   | 18                        | 23     | 32     | 7      | s. 79 e.        | 26        | Pueblo, Colo.                       | 22                        | 11     | 14     | 29     | n. 54 w.        | 19        |  |  |  |  |  |
| Fort Smith, Ark.                  | 11                        | 8      | 44     | 7      | n. 85 e.        | 37        | Concordia, Kans.                    | 9                         | 39     | 16     | 5      | s. 20 e.        | 32        |  |  |  |  |  |
| Little Rock, Ark.                 | 16                        | 15     | 31     | 11     | s. 87 e.        | 20        | Dodge, Kans.                        | 10                        | 40     | 19     | 7      | s. 22 e.        | 32        |  |  |  |  |  |
| Corpus Christi, Tex.              | 11                        | 33     | 29     | 11     | s. 39 e.        | 28        | Wichita, Kans.                      | 16                        | 37     | 21     | 2      | s. 42 e.        | 28        |  |  |  |  |  |
| Galveston, Tex.                   | 9                         | 35     | 21     | 12     | s. 19 e.        | 28        | Oklahoma, Okla.                     | 9                         | 40     | 13     | 7      | s. 11 e.        | 32        |  |  |  |  |  |
| Palestine, Tex.                   | 21                        | 23     | 26     | 5      | s. 85 e.        | 21        | <i>Southern Slope.</i>              |                           |        |        |        |                 |           |  |  |  |  |  |
| San Antonio, Tex.                 | 17                        | 28     | 37     | 1      | s. 78 e.        | 38        | Abilene, Tex.                       | 11                        | 37     | 23     | 6      | s. 33 e.        | 31        |  |  |  |  |  |
| <i>Ohio Valley and Tennessee.</i> |                           |        |        |        |                 |           |                                     |                           |        |        |        |                 |           |  |  |  |  |  |
| Chattanooga, Tenn.                | 17                        | 26     | 19     | 17     | s. 13 e.        | 9         | Amarillo, Tex.                      | 5                         | 43     | 10     | 13     | s. 4 w.         | 38        |  |  |  |  |  |
| Knoxville, Tenn.                  | 27                        | 17     | 17     | 17     | n.              | 10        | <i>Southern Plateau.</i>            |                           |        |        |        |                 |           |  |  |  |  |  |
| Memphis, Tenn.                    | 23                        | 18     | 20     | 17     | n. 17 e.        | 10        | El Paso, Tex.                       | 14                        | 10     | 43     | 9      | n. 83 e.        | 34        |  |  |  |  |  |
| Nashville, Tenn.                  | 20                        | 17     | 15     | 27     | n. 76 w.        | 12        | Santa Fe, N. Mex.                   | 9                         | 27     | 30     | 7      | s. 52 e.        | 29        |  |  |  |  |  |
| Lexington, Ky.                    | 10                        | 29     | 9      | 25     | s. 40 w.        | 25        | Phoenix, Ariz.                      | 20                        | 9      | 22     | 26     | n. 20 w.        | 19        |  |  |  |  |  |
| Louisville, Ky.                   | 13                        | 30     | 13     | 13     | s. 19 e.        | 28        | Yuma, Ariz.                         | 7                         | 28     | 20     | 22     | s. 5 w.         | 21        |  |  |  |  |  |
| Evansville, Ind.†                 | 8                         | 18     | 8      | 10     | s. 14 w.        | 8         | Independence, Cal.                  | 15                        | 26     | 8      | 25     | s. 57 w.        | 20        |  |  |  |  |  |
| Indianapolis, Ind.                | 22                        | 23     | 6      | 25     | s. 87 w.        | 19        | <i>Middle Plateau.</i>              |                           |        |        |        |                 |           |  |  |  |  |  |
| Cincinnati, Ohio                  | 14                        | 26     | 22     | 18     | s. 18 e.        | 13        | Carson City, Nev.                   | 12                        | 17     | 7      | 38     | s. 81 w.        | 31        |  |  |  |  |  |
| Columbus, Ohio                    | 17                        | 30     | 10     | 20     | s. 38 w.        | 16        | Winnebucca, Nev.                    | 15                        | 13     | 15     | 27     | s. 81 w.        | 17        |  |  |  |  |  |
| Pittsburg, Pa.                    | 12                        | 23     | 11     | 30     | s. 60 w.        | 22        | Salt Lake City, Utah.               | 13                        | 27     | 24     | 14     | s. 86 e.        | 17        |  |  |  |  |  |
| Parkersburg, W. Va.               | 9                         | 32     | 20     | 14     | s. 15 e.        | 24        | <i>Northern Plateau.</i>            |                           |        |        |        |                 |           |  |  |  |  |  |
| <i>Lower Lake Region.</i>         |                           |        |        |        |                 |           |                                     |                           |        |        |        |                 |           |  |  |  |  |  |
| Buffalo, N. Y.                    | 11                        | 24     | 10     | 31     | s. 59 w.        | 25        | Baker City, Oreg.                   | 19                        | 32     | 8      | 16     | s. 84 w.        | 14        |  |  |  |  |  |
| Oswego, N. Y.                     | 8                         | 34     | 9      | 23     | s. 28 w.        | 30        | Idaho Falls, Idaho                  | 31                        | 18     | 9      | 10     | n. 4 w.         | 18        |  |  |  |  |  |
| Rochester, N. Y.                  | 9                         | 33     | 6      | 35     | s. 50 w.        | 38        | Tacoma, Wash.                       | 30                        | 11     | 3      | 29     | s. 70 e.        | 12        |  |  |  |  |  |
| Erie, Pa.                         | 8                         | 28     | 10     | 27     | s. 40 w.        | 26        | Portland, Oreg.                     | 25                        | 16     | 10     | 31     | n. 67 w.        | 23        |  |  |  |  |  |
| Cleveland, Ohio                   | 16                        | 32     | 17     | 11     | s. 21 e.        | 17        | Roseburg, Oreg.                     | 40                        | 4      | 12     | 15     | n. 5 w.         | 36        |  |  |  |  |  |
| Sandusky, Ohio                    | 10                        | 30     | 12     | 26     | s. 39 w.        | 22        | <i>Little Pacific Coast Region.</i> |                           |        |        |        |                 |           |  |  |  |  |  |
| Toledo, Ohio                      | 11                        | 21     | 12     | 33     | s. 65 w.        | 23        | Eureka, Cal.                        | 25                        | 15     | 6      | 36     | n. 72 w.        | 32        |  |  |  |  |  |
| Detroit, Mich.                    | 19                        | 22     | 14     | 23     | s. 72 w.        | 10        | Red Bluff, Cal.                     | 14                        | 34     | 24     | 4      | s. 45 e.        | 29        |  |  |  |  |  |
| <i>Upper Lake Region.</i>         |                           |        |        |        |                 |           |                                     |                           |        |        |        |                 |           |  |  |  |  |  |
| Alpena, Mich.                     | 24                        | 16     | 18     | 22     | n. 27 w.        | 9         | Sacramento, Cal.                    | 4                         | 47     | 6      | 21     | s. 19 w.        | 46        |  |  |  |  |  |
| Grand Haven, Mich.                | 26                        | 17     | 18     | 23     | n. 48 w.        | 14        | San Francisco, Cal.                 | 1                         | 25     | 0      | 52     | s. 65 w.        | 57        |  |  |  |  |  |
| Marquette, Mich.                  | 26                        | 18     | 11     | 24     | n. 52 w.        | 16        | <i>South Pacific Coast Region.</i>  |                           |        |        |        |                 |           |  |  |  |  |  |
| Port Huron, Mich.                 | 22                        | 24     | 12     | 18     | s. 72 w.        | 6         | Fresno, Cal.                        | 36                        | 4      | 1      | 42     | n. 52 w.        | 52        |  |  |  |  |  |
| Sault Ste. Marie, Mich.           | 26                        | 9      | 19     | 22     | n. 10 w.        | 17        | Los Angeles, Cal.                   | 2                         | 23     | 2      | 50     | s. 66 w.        | 52        |  |  |  |  |  |
| Chicago, Ill.                     | 17                        | 26     | 21     | 15     | s. 34 e.        | 11        | San Diego, Cal.                     | 24                        | 16     | 4      | 37     | n. 76 w.        | 34        |  |  |  |  |  |
| Milwaukee, Wis.                   | 19                        | 23     | 17     | 19     | s. 27 w.        | 4         | San Luis Obispo, Cal.               | 24                        | 15     | 3      | 28     | n. 70 w.        | 27        |  |  |  |  |  |

\* From observations at 8 p. m. only.

† From observations at 8 a. m. only.

TABLE VIII.—*Thunderstorms and auroras, August, 1898.*

| States.                 | No. of stations. |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Total. | Days. |     |    |    |
|-------------------------|------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|-------|-----|----|----|
|                         |                  | 1  | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  | 24  | 25  | 26  | 27  | 28  | 29  | 30  | 31     |       |     |    |    |
| Alabama .....           | 55               | T. | 4   | 2   | 2   | 3   | 3   | 3   | 2   | 2   | 1   | ... | 3   | 2   | 1   | 2   | 2   | 1   | 2   | 1   | ... | 2   | ... | 1   | 2   | 4   | 2   | ... | ... | ... | 47  | 32     | T.    |     |    |    |
| Arizona .....           | 56               | A. | 1   | 4   | 8   | 7   | 4   | 5   | 4   | 4   | 6   | 7   | 2   | 4   | 4   | 7   | 8   | 6   | 5   | 6   | 5   | 9   | 8   | 5   | 4   | 5   | 6   | 7   | 7   | 6   | 6   | 5      | 172   | 31  | T. |    |
| Arkansas .....          | 59               | T. | 6   | 13  | 2   | ... | 2   | 11  | 9   | 3   | 1   | 4   | 1   | ... | 3   | 9   | 1   | ... | 9   | 12  | 2   | 1   | 1   | ... | 1   | 90  | 19  | T.  | 0   | 0   | A.  |        |       |     |    |    |
| California .....        | 180              | A. | 1   | ... | 4   | 2   | ... | 4   | 2   | 1   | 3   | 5   | 3   | 1   | ... | 3   | 2   | 1   | ... | 1   | ... | 5   | 2   | ... | 2   | 42  | 16  | T.  | 0   | 0   | A.  |        |       |     |    |    |
| Colorado .....          | 72               | T. | 15  | 2   | 3   | 2   | 13  | 20  | 6   | 11  | 7   | 1   | 5   | 7   | 10  | 9   | 5   | 17  | 15  | 7   | 6   | 11  | 9   | 14  | 6   | 1   | ... | 1   | 17  | 221 | 27  | T.     |       |     |    |    |
| Connecticut .....       | 21               | T. | ... | 1   | 16  | 9   | ... | 11  | 2   | 3   | ... | ... | ... | 12  | 15  | 6   | 8   | ... | 14  | 14  | 5   | ... | ... | ... | 1   | ... | 1   | ... | 116 | 13  | T.  |        |       |     |    |    |
| Delaware .....          | 5                | T. | ... | ... | ... | ... | 2   | 2   | 2   | ... | ... | ... | 1   | 1   | 1   | ... | 1   | 1   | 1   | ... | 1   | 1   | 1   | ... | 1   | 1   | 1   | ... | 1   | 1   | 12  | 9      | T.    |     |    |    |
| Dist. of Columbia ..... | 4                | T. | ... | 1   | ... | 1   | ... | 1   | 1   | ... | ... | ... | 1   | ... | 1   | ... | 1   | ... | 1   | 1   | 1   | ... | 1   | 1   | 1   | ... | 1   | 1   | 1   | ... | 5   | 5      | T.    |     |    |    |
| Florida .....           | 45               | T. | 5   | 5   | 4   | 5   | 5   | 7   | 6   | 8   | 7   | 8   | 7   | 9   | 7   | 4   | 5   | 8   | 1   | 6   | 4   | 8   | 9   | 5   | 9   | 4   | 6   | 4   | 6   | 7   | 4   | 4      | 3     | 178 | 31 | T. |
| Georgia .....           | 55               | T. | 5   | 3   | 2   | 4   | 4   | 3   | 1   | 3   | 1   | 1   | 3   | 4   | ... | 1   | 1   | 2   | 2   | 1   | ... | 1   | 1   | 1   | 6   | 3   | 1   | 1   | 1   | 2   | 1   | 0      | 0     | 23  | 28 | T. |
| Idaho .....             | 38               | T. | ... | 3   | 3   | 3   | ... | 3   | 1   | ... | 2   | 5   | 3   | 6   | 3   | ... | 1   | 3   | 2   | ... | 1   | 1   | 1   | 3   | 1   | 3   | 7   | 2   | 57  | 21  | T.  |        |       |     |    |    |
| Illinois .....          | 86               | T. | 4   | 15  | 11  | ... | 1   | 13  | 8   | ... | 1   | 4   | 17  | 16  | 17  | 11  | 11  | 3   | 5   | 7   | 16  | 20  | 3   | 28  | 7   | ... | 1   | 1   | 1   | 1   | 215 | 44     | A.    |     |    |    |
| Indiana .....           | 57               | T. | 2   | 10  | 8   | ... | 4   | 3   | ... | 3   | ... | 1   | 2   | 13  | 10  | ... | 1   | 2   | 12  | ... | 8   | 6   | ... | 4   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 95     | 4     | A.  |    |    |
| Indian Territory .....  | 7                | T. | 1   | 1   | 1   | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | 2   | 2   | 1   | 1   | ... | 1   | 12  | 10  | T.  | 0   | 0   | A.  |        |       |     |    |    |
| Iowa .....              | 120              | T. | 4   | ... | 6   | 9   | 5   | ... | 3   | ... | 2   | 8   | 10  | 10  | 8   | 2   | 1   | 13  | 13  | 4   | 13  | 2   | ... | 7   | 3   | ... | 121 | 19  | T.  |     |     |        |       |     |    |    |
| Kansas .....            | 85               | T. | 2   | 5   | ... | 1   | 16  | 6   | ... | ... | 7   | 8   | 4   | 2   | 9   | 14  | 9   | ... | 9   | 11  | ... | ... | ... | ... | 1   | 1   | 1   | 1   | 108 | 14  | A.  |        |       |     |    |    |
| Kentucky .....          | 48               | T. | 3   | 4   | 9   | ... | 1   | 2   | 6   | 2   | 2   | 2   | 2   | 2   | 2   | 9   | 1   | ... | 2   | 6   | 4   | ... | 2   | 1   | ... | 58  | 17  | T.  |     |     |     |        |       |     |    |    |
| Louisiana .....         | 46               | T. | 6   | 4   | 5   | 5   | 5   | 6   | 5   | 7   | 5   | 3   | 4   | 3   | 5   | 2   | 4   | 4   | 4   | 5   | 4   | 5   | 5   | 4   | 6   | 5   | 6   | 6   | 2   | 141 | 31  | T.     |       |     |    |    |
| Maine .....             | 18               | T. | ... | 3   | ... | ... | ... | ... | ... | ... | 2   | ... | 2   | ... | 2   | ... | 2   | ... | 1   | 6   | 2   | ... | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 26  | 10     | T.    |     |    |    |
| Maryland .....          | 40               | T. | 11  | 3   | 5   | 11  | 2   | ... | 1   | 11  | 9   | 7   | 4   | 1   | 2   | ... | 8   | 14  | 8   | ... | ... | 8   | 5   | ... | 1   | 111 | 18  | T.  |     |     |     |        |       |     |    |    |
| Massachusetts .....     | 59               | T. | 1   | ... | 1   | 25  | 1   | ... | 1   | 18  | 3   | 6   | 1   | 2   | ... | 6   | 23  | 15  | 5   | 2   | ... | 28  | 17  | 13  | 1   | ... | 167 | 18  | T.  |     |     |        |       |     |    |    |
| Michigan .....          | 104              | T. | 1   | 5   | ... | 3   | 4   | ... | 1   | 12  | ... | 3   | 17  | 5   | 7   | 1   | 1   | ... | 8   | 10  | 13  | 10  | 6   | ... | 5   | ... | 112 | 2   | A.  |     |     |        |       |     |    |    |
| Minnesota .....         | 67               | T. | 2   | 5   | 2   | 4   | 20  | 2   | ... | 2   | ... | 1   | 1   | 9   | 7   | 3   | ... | 14  | 7   | 1   | 7   | ... | 1   | 2   | 2   | 4   | ... | 97  | 21  | A.  |     |        |       |     |    |    |
| Mississippi .....       | 48               | T. | 8   | 9   | 8   | 10  | 5   | 6   | 7   | 8   | 9   | 4   | 3   | 2   | 1   | 2   | 5   | 4   | 5   | 8   | 10  | 7   | 6   | 1   | 3   | 10  | 12  | 8   | 4   | 1   | 2   | 4      | 6     | 178 | 31 | T. |
| Missouri .....          | 95               | T. | 11  | 3   | 1   | 1   | 12  | 20  | 5   | ... | 3   | 4   | 6   | 1   | 15  | 24  | 10  | ... | 1   | ... | 12  | 20  | 1   | 3   | 2   | ... | 116 | 20  | T.  |     |     |        |       |     |    |    |
| Montana .....           | 40               | T. | ... | 3   | 2   | ... | ... | 4   | 3   | ... | 1   | 8   | 10  | 3   | 5   | 7   | 1   | 1   | 1   | 1   | 2   | ... | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 55  | 17     | T.    |     |    |    |
| Nebraska .....          | 144              | T. | 7   | ... | 2   | 14  | 6   | 2   | ... | 9   | 4   | ... | 13  | 4   | 3   | 4   | ... | 1   | 2   | 10  | ... | 6   | 1   | ... | 88  | 16  | T.  |     |     |     |     |        |       |     |    |    |
| Nevada .....            | 50               | T. | 1   | 2   | 3   | 5   | 4   | 6   | 2   | ... | 1   | 3   | 4   | 3   | 5   | 1   | ... | 2   | ... | 1   | 1   | 1   | 6   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 62  | 22     | T.    |     |    |    |
| New Hampshire .....     | 21               | T. | ... | 8   | 6   | 1   | 7   | ... | ... | ... | ... | 1   | 8   | 7   | ... | 2   | ... | 3   | 3   | 12  | 11  | 7   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 75  | 13  | T.     |       |     |    |    |
| New Jersey .....        | 51               | T. | 10  | 1   | 13  | 7   | 5   | 1   | 13  | 8   | 12  | 2   | 1   | 1   | ... | 4   | 15  | 14  | 8   | ... | 3   | 11  | 2   | ... | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 130    | 19    | T.  |    |    |
| New Mexico .....        | 34               | T. | 2   | 2   | 4   | 2   | 2   | 2   | 3   | 2   | 1   | 3   | 4   | 3   | 1   | 4   | 3   | 1   | ... | 1   | 2   | 2   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 42  | 21  | T.     |       |     |    |    |
| New York .....          | 113              | T. | 24  | 4   | 23  | 20  | 7   | ... | 4   | 11  | 1   | 1   | 18  | 2   | 5   | 2   | 33  | 25  | 6   | 5   | 1   | 8   | 31  | 40  | 15  | 1   | 1   | 2   | 14  | 2   | 4   | 310    | 28    | T.  |    |    |
| North Carolina .....    | 57               | T. | 7   | 12  | 7   | 4   | 3   | 7   | 3   | 3   | 6   | 9   | 9   | 5   | 4   | 13  | 4   | 5   | 3   | 9   | 13  | 7   | 6   | ... | 2   | 15  | 5   | 7   | 3   | 4   | 1   | 4      | 180   | 29  | T. |    |
| North Dakota .....      | 52               | T. | 3   | ... | 3   | 4   | ... | ... | ... | ... | ... | 3   | 5   | 2   | ... | 1   | 5   | ... | 6   | 5   | 1   | 1   | ... | 3   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 44     | 15    | A.  |    |    |
| Ohio .....              | 134              | T. | 15  | 7   | 35  | 4   | 1   | ... | 18  | 1   | 1   | 1   | 18  | 3   | 2   | 1   | 1   | 17  | 32  | 32  | 4   | ... | 7   | 41  | 1   | 3   | ... | 22  | 15  | 1   | 296 | 23     | T.    |     |    |    |
| Oklahoma .....          | 21               | T. | 1   | 3   | ... | 1   | 1   | ... | ... | ... | ... | 1   | ... | ... | 1   | ... | ... | 1   | ... | 4   | 1   | ... | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 13     | 8     | T.  |    |    |
| Oregon .....            | 72               | T. | ... | ... | ... | 2   | 5   | ... | 3   | 3   | 3   | 2   | 3   | ... | 2   | 2   | 2   | 4   | ... | 2   | 1   | ... | 2   | 8   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 46     | 17    | T.  |    |    |
| Pennsylvania .....      | 105              | T. | 10  | 2   | 32  | 21  | 9   | 3   | 2   | 17  | 6   | 7   | 1   | 4   | ... | 16  | 31  | 24  | 12  | 1   | ... | 2   | 32  | 5   | 5   | ... | 4   | 3   | ... | 249 | 23  | T.     |       |     |    |    |
| Rhode Island .....      | 8                | T. | ... | 1   | 2   | ... | ... | 2   | 2   | 2   | ... | 1   | ... | 5   | 1   | 4   | ... | 1   | 3   | 1   | ... | 1   | ... | 1   | ... | 1   | ... | 1   | ... | 25  | 12  | T.     |       |     |    |    |
| South Carolina .....    | 40               | T. | 1   | 1   | 2   | 1   | 4   | 1   | ... | 1   | 2   | ... | 1   | ... | 1   | ... | 1   | ... | 1   | ... | 1   | ... | 1   | ... | 1   | ... | 1   | ... | 1   | ... | 16  | 11     | T.    |     |    |    |
| South Dakota .....      | 56               | T. | 1   | 1   | 6   | 8   | 2   | ... | ... | ... | ... | 1   | 2   | 3   | 1   | 7   | ... | 3   | ... | 2   | 1   | ... | 1   | ... | 39  | 14  | T.  |     |     |     |     |        |       |     |    |    |
| Tennessee .....         | 59               | T. | 6   | 3   | 6   | 2   | ... | 4   | 5   | 6   | 11  | 3   | 4   | 5   | 1   | ... | 6   | 6   | 2   | ... | 4   | 7   | ... | 1   | ... | 82  | 18  | A.  |     |     |     |        |       |     |    |    |
| Texas .....             | 89               | T. | 2   | 10  | 6   | 9   | 8   | 4   | 6   | 11  | 2   | 1   | ... | 1   | 2   | 2   | 2   | 3   | 5   | 5   | 5   | 1   | 7   | 4   | 5   | 7   | 7   | 1   | ... | 122 | 27  | A.     |       |     |    |    |
| Utah .....              | 88               | T. | 2   | 7   | 8   | 7   | 1   | ... | 1   | 2   | ... | 2   | 1   | 4   | 6   | 7   | ... | 2   | 1   | 4   | 3   | 6   | ... | 1   | ... | 2   | 5   | 1   | 1   | 1   | 1   | 73     | 21    | T.  |    |    |
| Vermont .....           | 14               | T. | 4   | ... | 5   | 3   | ... | 1   | 1   | 1   | ... | 1   | ... | 6   | 5   | 1   | ... | 4   | 7   | 5   | 7   | ... | 1   | ... | 52  | 15  | T.  |     |     |     |     |        |       |     |    |    |
| Virginia .....          | 48               | T. | 1   | 7   | 3   | 5   | 1   | ... | 7   | 3   | 10  | 3   | 2   | 2   | 3   | 4   | 3   | ... | 3   | 1   | 4   | 1   | 1   | 3   | 2   | 9   | ... | 1   | ... | 89  | 23  | T.     |       |     |    |    |
| Washington .....        | 50               | T. | ... | ... | ... | 1   | ... | ... | ... | 1   | ... | 1   | ... | 1   | 8   | 3   | 2   | 5   | ... | 1   | ... | 1   | 1   | 2   | ... | 20  | 11  | T.  |     |     |     |        |       |     |    |    |
| West Virginia .....     | 33               | T. | 2   | 2   | 7   | 3   | ... | 3   | 2   | 2   | 1   | 1   | 4   | ... | 1   | 3   | 5   | 4   | ... | 3   | 4   | 1   | 2   | 1   | ... | 1   | 0   | ... | 52  | 19  | T.  |        |       |     |    |    |
| Wisconsin .....         | 60               | T. | ... | ... | 3   | 1   | ... | 1   | ... | 1   | ... | 2   | 16  | 18  | 7   | 2   | 1   | 1   | ... | 2   | 4   | 3   | ... | 1   | ... | 57  | 11  | T.  |     |     |     |        |       |     |    |    |
| Wyoming .....           | 17               | T. | 1   | ... | 2   | 5   | 1   | ... | 1   | ... | 1   | 2   | 1   | 2   | 4   | 2   | 2   | 3   | 4   | ... | 1   | ... | 1   | 2   | 4   | 2   | ... | 38  | 18  | T.  |     |        |       |     |    |    |
| Sums .....              | 2,871            | T. | 166 | 160 | 237 | 230 | 172 | 129 | 173 | 223 | 119 | 93  | 92  | 121 | 109 | 145 | 162 | 255 | 319 | 258 | 178 | 108 | 113 | 94  |     |     |     |     |     |     |     |        |       |     |    |    |

TABLE IX.—Average hourly sunshine (in percentages). August, 1898.

| Stations.             | Instrument. | Percentages for each hour of local mean time ending with the respective hour. |    |    |    |    |    |     |       |     |     |    |    |    |       | Hours of sunshine. |       |           |                      |                    |    |    |
|-----------------------|-------------|---|----|----|----|----|----|-----|-------|-----|-----|----|----|----|-------|--------------------|-------|-----------|----------------------|--------------------|----|----|
|                       |             | A. M.   |    |    |    |    |    |     | P. M. |     |     |    |    |    |       | Actual.            |       | Total.    |                      |                    |    |    |
|                       |             | 5   | 6  | 7  | 8  | 9  | 10 | 11  | Noon  | 1   | 2   | 3  | 4  | 5  | 6     | 7                  | 8     | Possible. | Percent of possible. | Personal estimate. |    |    |
| Albany, N. Y.*        | T.          | 11  | 8  | 13 | 33 | 64 | 74 | 79  | 78    | 76  | 76  | 70 | 56 | 39 | 31    | 23                 | 31    | 222.2     | 431.3                | 52                 | 34 |    |
| Atlanta, Ga.          | T.          | 21  | 23 | 26 | 37 | 48 | 43 | 39  | 35    | 38  | 40  | 28 | 8  | 6  | 0     | 127.6              | 415.8 | 31        | 25                   |                    |    |    |
| Atlantic City, N. J.  | P.          | 63  | 67 | 72 | 79 | 83 | 79 | 75  | 80    | 80  | 73  | 63 | 41 | 36 | 36    | 297.5              | 423.2 | 70        | 57                   |                    |    |    |
| Baltimore, Md.        | T.          | 25  | 30 | 38 | 68 | 86 | 86 | 88  | 85    | 86  | 84  | 78 | 68 | 59 | 45    | 32                 | 285.6 | 423.2     | 67                   | 58                 |    |    |
| Binghamton, N. Y.     | T.          | 0   | 8  | 14 | 27 | 51 | 68 | 73  | 75    | 70  | 72  | 62 | 49 | 40 | 33    | 27                 | 15    | 207.1     | 429.4                | 48                 | 48 |    |
| Bismarck, N. Dak.     | P.          | 32  | 44 | 58 | 70 | 75 | 81 | 84  | 85    | 71  | 71  | 75 | 75 | 69 | 62    | 50                 | 56    | 303.2     | 440.0                | 69                 | 67 |    |
| Boston, Mass.         | T.          | 17  | 24 | 34 | 44 | 53 | 63 | 74  | 74    | 75  | 72  | 73 | 65 | 61 | 42    | 33                 | 31    | 242.0     | 429.4                | 58                 | 46 |    |
| Buffalo, N. Y.        | T.          | 11  | 19 | 40 | 63 | 69 | 73 | 82  | 77    | 80  | 75  | 72 | 74 | 71 | 44    | 27                 | 12    | 267.3     | 481.3                | 62                 | 58 |    |
| Charleston, S. C.     | T.          | 15  | 14 | 15 | 38 | 46 | 40 | 40  | 39    | 42  | 49  | 39 | 43 | 34 | 6     | 4                  | 126.2 | 414.0     | 30                   | 32                 |    |    |
| Chattanooga, Tenn.    | T.          | 35  | 34 | 43 | 63 | 72 | 77 | 77  | 80    | 70  | 74  | 74 | 52 | 41 | 30    | 0                  | 248.4 | 417.1     | 60                   | 53                 |    |    |
| Cheyenne, Wyo.        | P.          | 60  | 67 | 75 | 82 | 83 | 83 | 83  | 83    | 84  | 75  | 69 | 60 | 58 | 41    | 20                 | 25    | 294.7     | 427.4                | 69                 | 62 |    |
| Chicago, Ill.         | T.          | 17  | 34 | 41 | 55 | 63 | 72 | 83  | 72    | 80  | 82  | 79 | 73 | 60 | 35    | 37                 | 50    | 268.7     | 429.4                | 63                 | 63 |    |
| Cincinnati, Ohio.     | T.          | 71  | 71 | 75 | 82 | 87 | 86 | 89  | 89    | 88  | 88  | 83 | 81 | 73 | 60    | 51                 | 55    | 331.2     | 428.2                | 78                 | 63 |    |
| Cleveland, Ohio.      | T.          | 33  | 43 | 45 | 47 | 48 | 59 | 64  | 73    | 77  | 73  | 74 | 72 | 59 | 37    | 32                 | 42    | 247.9     | 429.4                | 58                 | 58 |    |
| Columbia, Mo.         | T.          | 67  | 63 | 70 | 76 | 84 | 86 | 92  | 96    | 93  | 92  | 88 | 85 | 81 | 68    | 64                 | 344.7 | 423.2     | 91                   | 80                 |    |    |
| Columbus, Ohio.       | T.          | 0   | 58 | 63 | 80 | 96 | 96 | 95  | 97    | 95  | 94  | 91 | 91 | 87 | 65    | 61                 | 79    | 357.6     | 425.2                | 84                 | 54 |    |
| Denver, Colo.         | P.          | 60  | 79 | 81 | 88 | 85 | 91 | 95  | 95    | 84  | 75  | 70 | 64 | 56 | 43    | 26                 | 21    | 314.5     | 425.2                | 74                 | 60 |    |
| Des Moines, Iowa.     | T.          | 33  | 67 | 69 | 71 | 74 | 83 | 81  | 83    | 82  | 84  | 85 | 83 | 80 | 78    | 71                 | 46    | 334.3     | 429.4                | 78                 | 71 |    |
| Detroit, Mich.        | T.          | 20  | 27 | 35 | 54 | 65 | 76 | 79  | 81    | 81  | 80  | 75 | 73 | 58 | 50    | 42                 | 31    | 270.9     | 429.4                | 63                 | 46 |    |
| Dodge, Kans.          | P.          | 71  | 85 | 89 | 87 | 90 | 90 | 88  | 93    | 92  | 95  | 92 | 88 | 85 | 87    | 78                 | 48    | 368.5     | 422.1                | 87                 | 81 |    |
| Dubuque, Iowa.        | T.          | 5   | 32 | 41 | 57 | 69 | 82 | 87  | 84    | 83  | 85  | 80 | 81 | 72 | 63    | 49                 | 31    | 296.7     | 429.4                | 69                 | 57 |    |
| Eastport, Me.         | T.          | 21  | 11 | 17 | 27 | 38 | 48 | 54  | 51    | 52  | 55  | 63 | 49 | 51 | 45    | 30                 | 20    | 182.4     | 435.6                | 42                 | 27 |    |
| Erie, Pa.             | T.          | 33  | 35 | 38 | 40 | 54 | 52 | 65  | 65    | 65  | 70  | 67 | 65 | 63 | 48    | 39                 | 30    | 224.7     | 420.4                | 52                 | 43 |    |
| Eureka, Cal.          | P.          | 0   | 0  | 3  | 8  | 13 | 25 | 26  | 38    | 49  | 61  | 55 | 47 | 39 | 40    | 34                 | 15    | 135.1     | 427.4                | 32                 | 34 |    |
| Fresno, Cal.          | T.          | 82  | 86 | 92 | 90 | 93 | 95 | 100 | 100   | 100 | 100 | 99 | 91 | 86 | 78    | 60                 | 389.8 | 420.1     | 93                   | 86                 |    |    |
| Galveston, Tex.       | P.          | 22  | 55 | 76 | 74 | 77 | 67 | 75  | 75    | 68  | 73  | 70 | 70 | 46 | 1     | 260.1              | 408.0 | 64        | 47                   |                    |    |    |
| Harrisburg.           | T.          | 0   | 29 | 38 | 50 | 65 | 81 | 85  | 88    | 80  | 83  | 81 | 78 | 65 | 53    | 34                 | 21    | 279.4     | 435.2                | 66                 | 45 |    |
| Helena, Mont.         | T.          | 50  | 49 | 67 | 84 | 81 | 79 | 79  | 73    | 79  | 79  | 72 | 67 | 60 | 53    | 31                 | 49    | 298.8     | 440.0                | 68                 | 66 |    |
| Huron, S. Dak.        | T.          | 67  | 73 | 74 | 70 | 75 | 78 | 78  | 73    | 76  | 79  | 70 | 64 | 55 | 69    | 71                 | 56    | 311.2     | 433.6                | 72                 | 63 |    |
| Idaho Falls, Idaho†   | T.          |   |    |    |    |    |    |     |       |     |     |    |    |    |       |                    |       |           |                      |                    |    |    |
| Indianapolis, Ind.    | T.          | 0   | 42 | 45 | 47 | 50 | 60 | 70  | 75    | 81  | 73  | 71 | 62 | 55 | 41    | 33                 | 36    | 246.5     | 425.2                | 58                 | 42 |    |
| Jacksonville, Fla.    | T.          | 29  | 34 | 65 | 94 | 84 | 86 | 78  | 78    | 68  | 52  | 37 | 15 | 1  | 244.5 | 409.7              | 60    | 45        |                      |                    |    |    |
| Kansas City, Mo.      | P.          | 54  | 62 | 70 | 74 | 79 | 80 | 82  | 71    | 81  | 81  | 81 | 69 | 65 | 45    | 307.8              | 423.2 | 73        | 71                   |                    |    |    |
| Key West, Fla.        | T.          | 24  | 35 | 64 | 71 | 82 | 87 | 88  | 95    | 95  | 95  | 95 | 83 | 71 | 31    | 22                 | 282.8 | 403.8     | 70                   | 58                 |    |    |
| Knoxville, Tenn.      | T.          | 35  | 44 | 51 | 68 | 74 | 85 | 94  | 95    | 95  | 84  | 75 | 55 | 44 | 8     | 298.9              | 418.7 | 71        | 59                   |                    |    |    |
| Little Rock, Ark.     | T.          | 65  | 67 | 76 | 80 | 91 | 89 | 89  | 84    | 80  | 86  | 77 | 61 | 56 | 43    | 0                  | 314.3 | 417.1     | 75                   | 55                 |    |    |
| Los Angeles, Calif.   | P.          | 41  | 46 | 60 | 71 | 79 | 92 | 99  | 100   | 100 | 100 | 99 | 99 | 97 | 96    | 100                | 354.1 | 415.8     | 85                   | 69                 |    |    |
| Louisville, Ky.       | T.          | 73  | 75 | 73 | 65 | 83 | 83 | 84  | 84    | 84  | 85  | 80 | 69 | 53 | 49    | 48                 | 322.8 | 422.1     | 76                   | 54                 |    |    |
| Minneapolis, Minn.    | T.          | 32  | 34 | 44 | 62 | 78 | 76 | 79  | 85    | 87  | 82  | 79 | 78 | 66 | 37    | 18                 | 280.1 | 435.6     | 64                   | 53                 |    |    |
| Nashville, Tenn.      | T.          | 69  | 79 | 84 | 89 | 94 | 94 | 95  | 96    | 94  | 92  | 90 | 87 | 67 | 50    | 367.2              | 418.7 | 88        | 73                   |                    |    |    |
| New Orleans, La.      | T.          | 6   | 3  | 28 | 39 | 35 | 37 | 34  | 41    | 30  | 26  | 20 | 13 | 1  | 3     | 27                 | 97.0  | 409.7     | 24                   | 27                 |    |    |
| New York, N. Y.       | T.          | 0   | 2  | 17 | 37 | 46 | 62 | 73  | 77    | 74  | 72  | 73 | 61 | 50 | 36    | 18                 | 35    | 216.6     | 427.4                | 51                 | 42 |    |
| Northfield, Vt.       | P.          | 33  | 17 | 21 | 35 | 54 | 58 | 59  | 60    | 63  | 61  | 59 | 56 | 42 | 29    | 12                 | 10    | 194.0     | 433.6                | 45                 | 33 |    |
| Oklahoma, Okla.       | T.          | 75  | 83 | 94 | 97 | 97 | 97 | 94  | 95    | 95  | 95  | 90 | 87 | 86 | 85    | 86                 | 55    | 378.2     | 417.1                | 91                 | 74 |    |
| Omaha, Nebr.          | P.          | 68  | 88 | 48 | 73 | 76 | 71 | 81  | 78    | 74  | 77  | 75 | 78 | 65 | 61    | 45                 | 301.9 | 427.4     | 71                   | 74                 |    |    |
| Parkersburg, W. Va.   | T.          | 16  | 16 | 21 | 50 | 68 | 75 | 77  | 78    | 72  | 69  | 68 | 42 | 15 | 10    | 27                 | 207.1 | 423.2     | 49                   | 44                 |    |    |
| Philadelphia, Pa.     | T.          | 100   | 39 | 44 | 43 | 62 | 80 | 87  | 81    | 91  | 82  | 75 | 70 | 59 | 44    | 37                 | 29    | 370.3     | 425.2                | 64                 | 46 |    |
| Phoenix, Ariz.        | P.          | 59  | 68 | 73 | 75 | 81 | 81 | 78  | 88    | 84  | 82  | 82 | 73 | 54 | 38    | 30                 | 37.9  | 414.0     | 74                   | 60                 |    |    |
| Pittsburg, Pa.        | T.          | 0   | 21 | 30 | 43 | 65 | 76 | 82  | 83    | 88  | 86  | 83 | 78 | 64 | 47    | 27                 | 25    | 262.9     | 427.4                | 62                 | 40 |    |
| Portland, Me.         | T.          | 7   | 9  | 28 | 50 | 60 | 72 | 78  | 76    | 78  | 78  | 83 | 85 | 75 | 66    | 49                 | 12    | 8         | 252.7                | 433.6              | 58 | 36 |
| Portland, Oreg.       | T.          | 35  | 27 | 28 | 34 | 37 | 55 | 68  | 77    | 78  | 79  | 74 | 79 | 77 | 77    | 29                 | 28    | 271.2     | 437.6                | 62                 | 56 |    |
| Raleigh, N. C.        | T.          | 36  | 36 | 46 | 55 | 61 | 80 | 84  | 85    | 85  | 85  | 79 | 72 | 61 | 51    | 33                 | 28    | 245.2     | 418.7                | 59                 | 37 |    |
| Rochester, N. Y.      | T.          | 22  | 42 | 45 | 47 | 46 | 55 | 56  | 63    | 63  | 49  | 51 | 42 | 33 | 19    | 18                 | 12    | 191.3     | 431.3                | 44                 | 41 |    |
| St. Louis, Mo.        | T.          | 41  | 54 | 67 | 82 | 83 | 86 | 85  | 88    | 96  | 95  | 93 | 83 | 71 | 50    | 27                 | 28    | 328.8     | 423.2                | 78                 | 60 |    |
| St. Paul, Minn.       | P.          | 42  | 39 | 47 | 72 | 79 | 75 | 76  | 71    | 75  | 72  | 73 | 64 | 52 | 47    | 26                 | 28    | 284.2     | 435.6                | 65                 | 56 |    |
| Salt Lake City, Utah. | P.          | 76  | 70 | 72 | 76 | 77 | 79 | 82  | 87    | 88  | 86  | 85 | 81 | 75 | 60    | 41                 | 45    | 324.6     | 427.4                | 76                 | 49 |    |
| San Diego, Cal.       | P.          | 81  | 86 | 33 | 67 | 84 | 92 | 98  | 98    | 97  | 96  | 98 | 95 | 88 | 83    | 41                 | 28    | 317.9     | 414.0                | 77                 | 50 |    |
| San Francisco, Cal.   | T.          | 3   | 16 | 36 | 46 | 73 | 91 | 99  | 99    | 99  | 97  | 93 | 93 | 86 | 65    | 30                 | 0     | 288.3     | 422.1                | 68                 | 50 |    |
| Santa Fe, N. Mex.     | P.          | 58  | 70 | 86 | 89 | 99 | 91 | 85  | 80    | 70  | 70  | 51 | 58 | 50 | 46    | 30                 | 299.7 | 418.7     | 72                   | 55                 |    |    |
| Savannah, Ga.†        | T.          |   |    |    |    |    |    |     |       |     |     |    |    |    |       |                    |       |           |                      |                    |    |    |
| Seattle, Wash.        | T.          | 49  | 33 | 32 | 38 | 47 | 52 | 60  | 68    | 74  | 74  | 69 | 70 | 65 | 55    | 49                 | 68    | 250.1     | 442.5                | 57                 | 62 |    |
| Spokane, Wash.        | T.          | 91  | 75 | 74 | 81 | 85 | 87 | 91  | 89    | 90  | 85  | 82 | 78 | 75 | 72    | 64                 | 77    | 356.8     | 442.5                | 81                 | 77 |    |
| Tacoma, Wash.         | T.          | 50  | 39 | 35 | 37 | 41 | 47 | 62  | 70    | 75  | 74  | 65 | 54 | 46 | 48    | 38                 | 248.9 | 440.0     | 57                   | 57                 |    |    |
| Tampa, Fla.           | T.          | 69  | 67 | 61 | 71 | 77 | 79 | 71  | 66    | 64  | 47  | 26 | 15 | 12 | 14    | 316.8              | 406.9 |           |                      |                    |    |    |

TABLE X.—Accumulated amounts of precipitation for each 5 minutes, for storms in which the rate of fall equaled or exceeded 0.25 in any 5 minutes, or 0.75 in 1 hour during August, 1898, at all stations furnished with self-registering gauges.

| Stations.            | Date. | Total duration. |            | amt.<br>of precip-<br>itation. | Excessive rate. |            | Amount be-<br>fore excess<br>began. | Depths of precipitation (in inches) during periods of time as indicated. |         |         |         |         |         |         |         |         |         |         |         |          |          |
|----------------------|-------|-----------------|------------|--------------------------------|-----------------|------------|-------------------------------------|--|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|
|                      |       | From—           | To—        |                                | Began—          | Ended—     |                                     | 5 min.   | 10 min. | 15 min. | 20 min. | 25 min. | 30 min. | 35 min. | 40 min. | 45 min. | 50 min. | 60 min. | 80 min. | 100 min. | 120 min. |
| Albany, N. Y.        | 1     | 4.25 p.m.       | 7.20 p.m.  | 0.50                           | 4.25 p.m.       | 4.35 p.m.  | 0.00                                | 0.38   | 0.48    | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....    |          |
| Do.                  | 23    | 2.45 p.m.       | 6.45 p.m.  | 0.90                           | 8.02 p.m.       | 3.30 p.m.  | 0.18                                | 0.43   | 0.57    | 0.60    | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....    |          |
| Atlanta, Ga.         | 24    | 1.45 a.m.       | 10.50 a.m. | 1.06                           | 8.35 a.m.       | 9.05 a.m.  | 0.32                                | 0.16   | 0.35    | 0.51    | 0.67    | 0.78    | 0.87    | .....   | .....   | .....   | .....   | .....   | .....   | .....    |          |
| Atlantic City, N. J. | 8     | 7.45 p.m.       | 11.10 p.m. | 0.86                           | 10.30 p.m.      | 10.46 p.m. | 0.34                                | 0.08   | 0.21    | 0.39    | 0.44    | 0.52    | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....    |          |
| Do.                  | 10-11 | 5.30 p.m.       | 6.00 a.m.  | 1.98                           | 7.55 p.m.       | 8.10 p.m.  | 0.79                                | 0.24   | 0.38    | 0.46    | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....    |          |
| Baltimore, Md.       | 1     | 3.10 p.m.       | 4.00 p.m.  | 1.44                           | 8.15 p.m.       | 3.40 p.m.  | T.                                  | 0.46   | 0.78    | 1.16    | 1.36    | 1.42    | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....    |          |
| Do.                  | 4-5   | 11.40 p.m.      | D. N.      | 1.47                           | 11.50 p.m.      | 12.25 a.m. | 0.08                                | 0.05   | 0.29    | 0.48    | 0.78    | 0.94    | 1.02    | 1.09    | 1.12    | 1.17    | .....   | .....   | .....   | .....    |          |
| Binghamton, N. Y.    | 3-4   | 7.30 p.m.       | D. N.      | 1.16                           | 9.05 p.m.       | 9.59 p.m.  | 0.27                                | 0.06   | 0.18    | 0.25    | 0.32    | 0.40    | 0.46    | 0.56    | 0.60    | 0.64    | 0.71    | 0.77    | .....   | .....    |          |
| Bismarck, N. Dak.    | 29-30 | 8.01 p.m.       | D. N.      | 0.89                           | 9.53 p.m.       | 10.20 p.m. | 0.05                                | 0.37   | 0.66    | 0.70    | 0.75    | 0.80    | 0.95    | .....   | .....   | .....   | .....   | .....   | .....   | .....    |          |
| Boston, Mass.        | 17    | 4.50 p.m.       | 7.25 p.m.  | 1.08                           | 5.00 p.m.       | 5.35 p.m.  | T.                                  | 0.05   | 0.22    | 0.26    | 0.29    | 0.63    | 0.89    | 0.93    | .....   | .....   | .....   | .....   | .....   | .....    |          |
| Buffalo, N. Y.       | 17    | 1.10 a.m.       | 1.55 a.m.  | 0.52                           | 1.37 a.m.       | 1.40 a.m.  | T.                                  | 0.23   | 0.39    | 0.42    | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....    |          |
| Do.                  | 17    | 2.58 p.m.       | 3.40 p.m.  | 0.40                           | 2.59 p.m.       | 3.21 p.m.  | T.                                  | 0.13   | 0.29    | 0.30    | 0.37    | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....    |          |
| Cairo, Ill.          | 7-8   | 9.20 p.m.       | D. N.      | 1.05                           | 10.59 p.m.      | 11.25 p.m. | 0.32                                | 0.28   | 0.43    | 0.49    | 0.53    | 0.58    | 0.60    | 0.61    | 0.63    | 0.65    | .....   | .....   | .....   | .....    |          |
| Charleston, S. C.    | 21    | 4.45 a.m.       | 9.24 a.m.  | 1.17                           | 5.50 a.m.       | 6.20 a.m.  | 0.22                                | 0.04   | 0.22    | 0.40    | 0.70    | 0.86    | 0.92    | .....   | .....   | .....   | .....   | .....   | .....   | .....    |          |
| Do.                  | 27    | 6.12 a.m.       | 8.50 a.m.  | 1.08                           | 7.30 a.m.       | 8.35 a.m.  | 0.18                                | 0.12   | 0.16    | 0.24    | 0.25    | 0.26    | 0.28    | 0.33    | 0.48    | 0.60    | 0.63    | 0.71    | 0.96    | .....    |          |
| Do.                  | 27    | 12.53 p.m.      | 8.55 p.m.  | 1.41                           | 1.00 p.m.       | 1.30 p.m.  | 0.01                                | 0.21   | 0.31    | 0.48    | 0.59    | 0.63    | 0.68    | .....   | .....   | .....   | .....   | .....   | .....   | .....    |          |
| Do.                  | 28    | 10.18 p.m.      | 11.10 p.m. | 0.54                           | 10.20 p.m.      | 10.45 p.m. | T.                                  | 0.15   | 0.33    | 0.41    | 0.42    | 0.55    | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....    |          |
| Chicago, Ill.*       | 18    | 1.55 p.m.       | 3.10 p.m.  | 0.69                           | 2.10 p.m.       | 2.30 p.m.  | 0.06                                | 0.06   | 0.18    | 0.42    | 0.50    | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....    |          |
| Cincinnati, Ohio     | 18    | 0.65            | 0.65       | 0.26                           | .....           | .....      | .....                               | .....  | 0.39    | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | 0.23    | .....   | .....    |          |
| Cleveland, Ohio      | 24    | 0.65            | 0.65       | 0.26                           | .....           | .....      | .....                               | .....  | 0.39    | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | 0.15    | 0.46    | .....    |          |
| Columbus, Ohio       | 1     | 9.16 a.m.       | 11.30 a.m. | 1.22                           | 10.02 a.m.      | 10.45 a.m. | 0.10                                | 0.22   | 0.32    | 0.40    | 0.50    | 0.60    | 0.71    | 0.86    | 0.92    | 0.96    | .....   | .....   | 0.23    | .....    |          |
| Do.                  | 3     | 1.15 p.m.       | 6.00 p.m.  | 1.93                           | 1.45 p.m.       | 2.20 p.m.  | 0.02                                | 0.25   | 0.61    | 0.85    | 0.99    | 1.04    | 1.23    | 1.51    | 1.54    | 1.56    | .....   | .....   | 0.15    | 0.41     | .....    |
| Denver, Colo.        | 5     | 0.58            | 0.58       | 0.49                           | .....           | .....      | .....                               | .....  | 0.39    | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | 0.15    | 0.46    | 0.41     |          |
| Des Moines, Iowa     | 2     | 0.58            | 0.58       | 0.49                           | .....           | .....      | .....                               | .....  | 0.39    | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | 0.15    | 0.46    | 0.41     |          |
| Detroit, Mich.       | 18    | 6.50 p.m.       | 4.40 a.m.  | 2.04                           | 12.18 a.m.      | 12.55 a.m. | 0.12                                | 0.20   | 0.55    | 1.00    | 1.11    | 1.15    | 1.26    | 1.33    | 1.37    | .....   | .....   | 0.52    | 0.79    | 0.52     |          |
| Dodge, Kans.         | 6-7   | 1.17            | 2.04       | 12.18 a.m.                     | 12.55 a.m.      | 0.12       | 0.20                                | 0.55   | 1.00    | 1.11    | 1.15    | 1.26    | 1.33    | 1.37    | .....   | .....   | 0.52    | 0.79    | 0.52    | 0.41     |          |
| Duluth, Minn.        | 6     | 1.17            | 2.04       | 1.17                           | 3.28 p.m.       | 4.20 p.m.  | 0.10                                | 0.06   | 0.15    | 0.25    | 0.30    | 0.35    | 0.39    | 0.50    | 0.60    | 0.64    | 0.72    | 0.79    | 0.52    | 0.41     |          |
| Eastport, Me.        | 5     | 8.05 p.m.       | 4.35 p.m.  | 0.85                           | 3.28 p.m.       | 4.20 p.m.  | 0.01                                | 0.18   | 0.43    | 0.55    | 0.61    | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....    |          |
| Erie, Pa.            | 17    | 6.10 a.m.       | 7.30 a.m.  | 0.63                           | 6.35 a.m.       | 6.55 a.m.  | 0.01                                | 0.18   | 0.43    | 0.55    | 0.61    | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....    |          |
| Fresno, Cal†         | 9     | 7.37 a.m.       | 9.26 a.m.  | 1.26                           | 8.00 a.m.       | 8.35 a.m.  | 0.04                                | 0.16   | 0.44    | 0.76    | 0.88    | 1.02    | 1.10    | 1.16    | .....   | .....   | .....   | .....   | .....   | .....    |          |
| Galveston, Tex.      | 9     | 8.35 p.m.       | 9.26 a.m.  | 1.26                           | 8.00 a.m.       | 8.35 a.m.  | 0.04                                | 0.16   | 0.44    | 0.76    | 0.88    | 1.02    | 1.10    | 1.16    | .....   | .....   | .....   | .....   | .....   | .....    |          |
| Hannibal, Mo.        | 14    | 0.83            | 0.83       | 0.83                           | .....           | .....      | .....                               | .....  | 0.39    | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....    |          |
| Harrisburg, Pa.      | 3     | 5.17 p.m.       | 11.30 p.m. | 2.82                           | 5.45 p.m.       | 6.30 p.m.  | 0.32                                | 0.11   | 0.28    | 0.65    | 0.74    | 0.88    | 1.11    | 1.31    | 1.50    | 1.64    | .....   | .....   | .....   | .....    |          |
| Do.                  | 18    | 6.10 p.m.       | 7.58 p.m.  | 0.78                           | 6.12 p.m.       | 6.20 p.m.  | T.                                  | 0.42   | 0.55    | 0.61    | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....    |          |
| Hatteras, N. C.      | 16    | 7.30 a.m.       | 11.55 a.m. | 1.07                           | 8.40 a.m.       | 9.05 a.m.  | 0.05                                | 0.10   | 0.35    | 0.65    | 0.80    | 0.90    | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....    |          |
| Huron, S. Dak.       | 4     | 10.48 p.m.      | 11.55 p.m. | 0.36                           | 11.02 p.m.      | 11.15 p.m. | 0.01                                | 0.13   | 0.28    | 0.38    | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | 0.16     |          |
| Idaho Falls, Idaho   | 30    | 0.22            | 0.22       | 0.22                           | .....           | .....      | .....                               | .....  | 0.39    | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | 0.16     |          |
| Indianapolis, Ind.   | 18    | 7.10 a.m.       | 10.05 a.m. | 0.69                           | 7.25 a.m.       | 7.40 a.m.  | 0.03                                | 0.08   | 0.28    | 0.41    | 0.45    | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | 0.16     |          |
| Jacksonville, Fla.   | 10    | 5.15 p.m.       | 7.06 p.m.  | 0.73                           | 6.15 p.m.       | 6.33 p.m.  | 0.15                                | 0.10   | 0.38    | 0.42    | 0.51    | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | 0.16     |          |
| Do.                  | 11    | 3.50 p.m.       | 9.15 p.m.  | 1.31                           | 4.57 p.m.       | 5.23 p.m.  | 0.30                                | 0.34   | 0.50    | 0.59    | 0.63    | 0.70    | .....   | .....   | .....   | .....   | .....   | .....   | .....   | 0.16     |          |
| Jupiter, Fla.        | 1-2   | 7.58 a.m.       | D. N.      | 2.68                           | 12.46 a.m.      | 12.53 a.m. | 1.75                                | 0.13   | 0.32    | 0.41    | 0.43    | 0.44    | 0.55    | .....   | .....   | .....   | .....   | .....   | .....   | 0.16     |          |
| Kansas City, Mo.     | 2     | 9.05 a.m.       | 3.55 p.m.  | 1.76                           | 1.42 p.m.       | 2.20 p.m.  | 0.55                                | 0.10   | 0.15    | 0.27    | 0.43    | 0.59    | 0.74    | 0.87    | 0.92    | 0.97    | 1.00    | 1.05    | 1.81    | 1.97     |          |
| Do.                  | 17    | 12.40 a.m.      | 4.40 a.m.  | 2.72                           | 1.02 a.m.       | 2.55 a.m.  | 0.22                                | 0.14   | 0.45    | 0.52    | 0.53    | 0.58    | 0.55    | 0.55    | 0.59    | 0.66    | 0.71    | 0.89    | 1.26    | 1.61     | 1.97     |
| Key West, Fla*       | 18    | 7.50 a.m.       | 9.55 a.m.  | 1.09                           | 8.10 a.m.       | 9.20 a.m.  | 0.04                                | 0.05   | 0.10    | 0.20    | 0.35    | 0.40    | 0.45    | 0.52    | 0.60    | 0.66    | 0.71    | 0.83    | 1.02    | .....    |          |
| Knoxville, Tenn.     | 18    | 4.38 a.m.       | 4.38 a.m.  | 1.68                           | 1.20 a.m.       | 2.05 a.m.  | 0.32                                | 0.10   | 0.14    | 0.24    | 0.31    | 0.41    | 0.51    | 0.69    | 0.89    | 1.03    | 1.05    | 1.10    | .....   | .....    |          |
| Lincoln, Nebr.       | 6     | 12.57 a.m.      | 10.54 p.m. | D. N.                          | 11.20 p.m.      | 11.50 p.m. | 0.01                                | 0.10   | 0.19    | 0.49    | 0.55    | 0.59    | 0.65    | .....   | .....   | .....   | .....   | .....   | .....   | 0.75     |          |
| Little Rock, Ark.    | 8     | 7.53 p.m.       | 9.00 p.m.  | 0.57                           | 7.55 p.m.       | 8.10 p.m.  | 0.01                                | 0.25   | 0.42    | 0.50    | 0.54    | 0.54    | 0.58    | 0.61    | 0.65    | 0.65    | 0.65    | 0.65    | 0.65    | 0.65     |          |
| Los Angeles, Cal.    | 11    | .....           | .....      | .....                          | .....           | .....      | .....                               | .....  | 0.39    | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | 0.36     |          |
| Louisville, Ky.      | 8     | 1.50 p.m.       | 8.45 p.m.  | 3.33                           | 2.42 p.m.       | 3.35 p.m.  | 0.37                                | 0.58   | 0.82    | 1.32    | 1.42    | 1.57    | 1.81    | 1.86    | 1.86    | 2.01    | 2.06    | 0.60    | .....   | .....    |          |
| Memphis, Tenn.       | 9     | 0.89            | 0.89       | 0.89                           | .....           | .....      | .....                               | .....  | 0.37    | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | .....   | 0.60     |          |
| Milwaukee, Wis.      | 16    | 3.10 a.m.       | 5.10 a.m.  | 0.82                           | 3.30 a.m.       | 3.45 a.m.  | 0.10                                | 0.20   | 0.30    | 0.46    | 0.51    | 0.55    | 0.58    | .....   | .....   | .....   | .....   | .....   | .....   | 0.60     |          |
| Montgomery, Ala.     | 4     | 4.18 p.m.       | 4.37 p.m.  | 1.08                           | 4.32 p.m.       | 5.12 p.m.  | 0.01                                | 0.12   | 0.18    | 0.39    | 0.52    | 0.71    | 0.81    | 0.86    | 0.91    | .....   | .....   | .....   | .....   | 0.60     |          |
| Do.                  | 10    | 10.45 a.m.      | 12.30 p.m. | 0.60                           | 10.55 a.m.      | 11.08 a.m. | 0.05                                | 0.10   | 0.18    | 0.38    | 0.44    | 0.50    | 0.58    | 0.64    | 0.70    | 0.76    | 0.82    | 0.88    | 0.91    | 0.91     |          |
| Do.                  | 21    | 7.45 p.m.       | 8.40 p.m.  | 0.80                           | 7.50 p.m.       | 8.15 p.m.  | 0.08                                | 0.16   | 0.30    | 0.48    | 0.56    | 0.65    | 0.70    | 0.76    | 0.82    | 0.88    | 0.94    | 0.98    | 0.98    | 0.98     |          |
| Nantucket, Mass.     | 19    | 0.64            | 0.64       | 0.64                           | .....           | .....      | .....                               | .....  | 0.48    | 0.10    | 0.22    | 0.31    | 0.51    | 0.69    | 0.82    | 0.92    | 0.98    | 0.98    | 0.98    | 0.98     |          |
| Nashville, Tenn.     | 8-9   | 7.47 p.m.       | 9.40 a.m.  | 4.66                           | 9.47 p.m.       | 10.47 p.m. | 0.07                                | 0.07   | 0.10    | 0.18    | 0.31    | 0.40    | 0.54    | 0.72    | 0.92    | 1.01    | 1.15    | 1.31    | .....   | .....    |          |
| New Orleans, La.     | 3     | 2.55 p.m.       | 4.45 p.m.  | 1.06                           | 3.05 p.m.       | 3.35 p.m.  | 0.01                                | 0.21   | 0.27    | 0.34    | 0.53    | 0.62    | 0.82    | 0.94    | 0.99    | .....   | .....   | .....   | .....   | 0.82     |          |
| Do.                  | 5     | 11.00 a.m.      | 1.35 p.m.  | 2.07                           | 12.27 p.m.      | 1.10 p.m.  | 0.25                                | 0.15   | 0.22    | 0.26    | 0.46    | 0.71    | 0.92    | 1.16    | 1.41    |         |         |         |         |          |          |

TABLE X.—Accumulated amounts of precipitation for each 5 minutes, etc.—Continued.

| Stations.             | Date. | Total duration. |            | Total amt.<br>of precipi-<br>tation. | Excessive rate. |            | Amount be-<br>fore exces-<br>sive began. | Depths of precipitation (in inches) during periods of time as indicated. |            |            |            |            |            |            |            |            |            |            |            |             |             |
|-----------------------|-------|-----------------|------------|--------------------------------------|-----------------|------------|--|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|
|                       |       | From—           | To—        |                                      | Began—          | Ended—     |  | 5<br>min.  | 10<br>min. | 15<br>min. | 20<br>min. | 25<br>min. | 30<br>min. | 35<br>min. | 40<br>min. | 45<br>min. | 50<br>min. | 60<br>min. | 80<br>min. | 100<br>min. | 120<br>min. |
| Tampa, Fla.....       | 1     | 2               | 3          | 4                                    | 5               | 6          | 7  |  |            |            |            |            |            |            |            |            |            |            |            |             |             |
|                       | 22    | 12.40 p.m.      | 8.30 p.m.  | 3.08                                 | { 2.15 p.m.     | 2.35 p.m.  | 0.45                                     | 0.30   | 0.45       | 0.60       | 0.67       | 0.69       | 0.70       | .....      |            |            |            |            |            |             |             |
| Vicksburg, Miss.....  | 4     | 4.45 p.m.       | 7.05 p.m.  | 0.99                                 | 5.10 p.m.       | 6.20 p.m.  | 0.23                                     | 0.17   | 0.26       | 0.37       | 0.42       | 0.45       | 0.50       | 0.55       | 0.64       | 0.80       | 1.03       | 1.82       | 1.52       | .....       |             |
|                       |       |                 |            |                                      | 4.54 p.m.       | 5.24 p.m.  | T.                                       | 0.16   | 0.37       | 0.54       | 0.66       | 0.72       | 0.76       | 0.77       | 0.80       | 0.86       | 0.90       | 0.94       | .....      |             |             |
|                       |       |                 |            |                                      | { 11.20 a.m.    | 12.10 p.m. |  | 0.02   | 0.06       | 0.10       | 0.24       | 0.38       | 0.55       | 0.60       | 0.68       | 1.00       | 1.05       | .....      |            |             |             |
|                       |       |                 |            |                                      | 12.10 p.m.      | 1.00 p.m.  |  | 1.10   | 1.22       | 1.30       | 1.31       | 1.31       | 1.32       | 1.36       | 1.41       | 1.42       | 1.43       | .....      |            |             |             |
|                       |       |                 |            |                                      | 1.00 p.m.       | 1.50 p.m.  |  | 1.45   | 1.47       | 1.47       | 1.48       | 1.48       | 1.49       | 1.52       | 1.67       | 1.72       | 1.72       | .....      |            |             |             |
|                       |       |                 |            |                                      | 1.50 p.m.       | 2.40 p.m.  |  | 1.73   | 1.73       | 1.74       | 1.76       | 1.81       | 1.87       | 1.87       | 1.88       | 1.89       | 1.90       | .....      |            |             |             |
| Washington, D. C..... | 12    | 9.20 a.m.       | 11.00 p.m. | 4.96                                 | 2.40 p.m.       | 3.30 p.m.  | T.                                       | 1.92   | 1.97       | 2.03       | 2.06       | 2.11       | 2.18       | 2.23       | 2.29       | 2.37       | 2.46       | .....      |            |             |             |
|                       |       |                 |            |                                      | 3.30 p.m.       | 4.20 p.m.  |  | 2.47   | 2.54       | 2.58       | 2.61       | 2.61       | 2.62       | 2.69       | 2.76       | 2.80       | 2.80       | .....      |            |             |             |
|                       |       |                 |            |                                      | 4.20 p.m.       | 5.10 p.m.  |  | 2.81   | 2.82       | 2.82       | 2.82       | 2.83       | 2.86       | 2.96       | 3.04       | 3.23       | 3.30       | .....      |            |             |             |
|                       |       |                 |            |                                      | 5.10 p.m.       | 6.00 p.m.  |  | 3.41   | 3.50       | 3.53       | 3.55       | 3.57       | 3.59       | 3.60       | 3.63       | 3.69       | 3.70       | .....      |            |             |             |
|                       |       |                 |            |                                      | 6.00 p.m.       | 6.50 p.m.  |  | 3.71   | 3.74       | 3.80       | 3.88       | 3.95       | 4.00       | 4.04       | 4.10       | 4.20       | 4.24       | 4.72       | 4.76       | 4.85        | 4.92        |
|                       |       |                 |            |                                      | 6.50 p.m.       | 7.40 p.m.  |  | (4.31  | 4.39       | 4.45       | 4.50       | 4.55       | 4.60       | 4.65       | 4.68       | 4.72       | 4.76       | 4.85       | 4.92       | .....       |             |
| Wilmington, N. C..... | 11    | 12.48 p.m.      | 2.50 p.m.  | 0.41                                 | 1.39 p.m.       | 1.48 p.m.  | 0.05                                     | 0.17   | 0.34       | .....      | .....      | .....      | .....      | .....      | .....      | .....      | .....      | .....      | .....      | .....       |             |
| Do.....               | 21    | 1.50 p.m.       | 8.00 p.m.  | 0.56                                 | 2.13 p.m.       | 2.23 p.m.  | 0.22                                     | 0.21   | 0.32       | .....      | .....      | .....      | .....      | .....      | .....      | .....      | .....      | .....      | .....      | .....       |             |
| Yankton, S. Dak....   | 5-6   | .....           | .....      | 1.08                                 | .....           | .....      | .....                                    | .....  | .....      | .....      | .....      | .....      | .....      | .....      | .....      | .....      | 0.49       | .....      | .....      | .....       |             |

\*Record incomplete.

+No precipitation during the month.

†Partly estimated; instrument not working properly.

§ Ended D. N. August 31-September 1.

## MONTHLY WEATHER REVIEW.

AUGUST, 1898

TABLE XI.—*Excessive precipitation, by stations, for August, 1898.*

| Stations.                    | Monthly rainfall<br>10 inches, or more. | Rainfall 2.50<br>inches, or<br>more, in 24<br>hours. |         | Rainfall of 1 inch,<br>or more, in one<br>hour. |      | Amt. | Day. | Amt. | Time. | Day. |
|------------------------------|---|--|---------|---|------|------|------|------|-------|------|
|                              |   | Inches.  | Inches. | Ins.  | h.m. |      |      |      |       |      |
| Alco.                        | 17.48                                   | 4.52   | 29      |   |      |      |      |      |       |      |
| Bermuda.                     | 14.21                                   | 8.70   | 24      |   |      |      |      |      |       |      |
| Daphne.                      | 14.52                                   |  |         |   |      |      |      |      |       |      |
| Elba.                        | 10.90                                   |  |         |   |      |      |      |      |       |      |
| Eufaula.                     | 11.99                                   |  |         |   |      |      |      |      |       |      |
| Evergreen.                   | 13.62                                   |  |         |   |      |      |      |      |       |      |
| Fort Deposit.                | 10.28                                   |  |         |   |      |      |      |      |       |      |
| Goodwater.                   |   | 2.75   | 11      |   |      |      |      |      |       |      |
| Healing Springs.             | 11.30                                   |  |         |   |      |      |      |      |       |      |
| Marion.                      | 12.20                                   | 9.90   | 10      |   |      |      |      |      |       |      |
| Mobile.                      | 12.35                                   | 3.18   | 10-11   |   |      |      |      |      |       |      |
| Mount Willing.               |   | 2.50   | 12      |   |      |      |      |      |       |      |
| Newton.                      |   | 3.81   | 3       |   |      |      |      |      |       |      |
| Oneonta.                     |   |  |         | 1.62  | 0 25 | 25   |      |      |       |      |
| Rockmills.                   | 13.89                                   |  |         |   |      |      |      |      |       |      |
| Sturdevant.                  |   | 2.77   | 25      |   |      |      |      |      |       |      |
| Tuscumbia.                   |   | 2.80   | 4       |   |      |      |      |      |       |      |
| Do.                          |   | 2.50   | 18-19   |   |      |      |      |      |       |      |
| <i>Arkansas.</i>             |   |  |         |   |      |      |      |      |       |      |
| Beebranch.                   |   | 2.50   | 8       |   |      |      |      |      |       |      |
| Corning.                     |   | 2.98   | 8       |   |      |      |      |      |       |      |
| Dallas.                      |   | 2.73   | 1       |   |      |      |      |      |       |      |
| Elon.                        |   |  |         | 1.50  | 0 30 | 19   |      |      |       |      |
| Fort Smith.                  |   | 4.59   | 7-8     | 3.25  | 2 00 | 7-8  |      |      |       |      |
| Fulton.                      |   | 2.54   | 1       |   |      |      |      |      |       |      |
| Jonesboro.                   |   | 4.00   | 9       |   |      |      |      |      |       |      |
| Keesees Ferry.               |   | 3.20   | 8       | 1.21  | 0 45 | 2    |      |      |       |      |
| La Crosse.                   |   | 2.50   | 24      |   |      |      |      |      |       |      |
| Mena.                        |   | 3.40   | 1       |   |      |      |      |      |       |      |
| Monticello.                  |   |  |         | 1.97  | 1 05 | 4    |      |      |       |      |
| Moore.                       |   |  |         | 1.20  | 1 00 | 18   |      |      |       |      |
| Newport.                     |   |  |         | 2.20  | 2 00 | 18   |      |      |       |      |
| Oscoda.                      |   | 2.81   | 9       |   |      |      |      |      |       |      |
| Ozark.                       |   | 6.00   | 8       |   |      |      |      |      |       |      |
| Silver Springs.              |   | 8.28   | 7-8     |   |      |      |      |      |       |      |
| Stuttgart.                   |   |  |         | 1.03  | 1 00 | 10   |      |      |       |      |
| Wiggs.                       |   | 2.52   | 24      |   |      |      |      |      |       |      |
| <i>Colorado.</i>             |   |  |         |   |      |      |      |      |       |      |
| Yuma.                        |   | 3.00   | 1       | 3.00  | 0 45 | 1    |      |      |       |      |
| <i>Connecticut.</i>          |   |  |         |   |      |      |      |      |       |      |
| Colechester.                 |   | 2.85   | 11      |   |      |      |      |      |       |      |
| Waterbury.                   |   | 2.50   | 10-11   | 1.00  | 0 30 | 17   |      |      |       |      |
| <i>Delaware.</i>             |   |  |         |   |      |      |      |      |       |      |
| Newark.                      |   | 4.16   | 3-4     |   |      |      |      |      |       |      |
| <i>District of Columbia.</i> |   |  |         |   |      |      |      |      |       |      |
| Distributing Reservoir.      |   | 5.93   | 12      |   |      |      |      |      |       |      |
| Receiving Reservoir.         |   | 5.44   | 12      |   |      |      |      |      |       |      |
| Washington.                  |   | 4.96   | 12      | 1.80  | 1 05 | 12   |      |      |       |      |
| West Washington.             |   | 4.85   | 12      |   |      |      |      |      |       |      |
| <i>Florida.</i>              |   |  |         |   |      |      |      |      |       |      |
| Archer.                      |   | 2.70   | 5       | 2.70  | 1 00 | 5    |      |      |       |      |
| Brooksville.                 |   | 13.44  |         | 1.25  | 0 55 | 8    |      |      |       |      |
| Carrabelle.                  |   | 19.90  | 4.10    | 2-3   |      |      |      |      |       |      |
| Do.                          |   | 8.30   | 27-28   |   |      |      |      |      |       |      |
| Clermont.                    |   | 18.48  | 2.90    | 10  |      |      |      |      |       |      |
| Crawfordville.               |   | 20.56  | 4.06    | 3   |      |      |      |      |       |      |
| Do.                          |   | 9.08   | 28-29   |   |      |      |      |      |       |      |
| DeFunak Springs.             |   | 22.98  | 9.80    | 11  |      |      |      |      |       |      |
| Do.                          |   | 2.95   | 29      |   |      |      |      |      |       |      |
| Earnestville.                |   | 20.16  | 3.23    | 10  |      |      |      |      |       |      |
| Do.                          |   | 3.45   | 23      |   |      |      |      |      |       |      |
| Eustis.                      |   | 10.95  |         |   |      |      |      |      |       |      |
| Federal Point.               |   | 10.59  |         |   |      |      |      |      |       |      |
| Grasmere.                    |   | 12.20  | 2.55    | 23  |      |      |      |      |       |      |
| Haywood.                     |   | 11.12  |         |   |      |      |      |      |       |      |
| Huntington.                  |   | 10.79  | 2.75    | 10  |      |      |      |      |       |      |
| Jupiter.                     |   | 2.68   | 1-2     |   |      |      |      |      |       |      |
| Key West.                    |   |  |         | 1.47  | 1 00 | 8    |      |      |       |      |
| Kissimmee.                   |   | 11.41  |         |   |      |      |      |      |       |      |
| Lake Butler.                 |   |  |         | 1.70  | 1 10 | 5    |      |      |       |      |
| Lake City.                   |   |  |         | 1.70  | 1 00 | 23   |      |      |       |      |
| Lemon City.                  |   |  |         | 2.90  | 1    |      |      |      |       |      |
| Manatee.                     |   | 18.48  | 6.57    | 2   |      |      |      |      |       |      |
| Myers.                       |   | 11.62  | 3.00    | 8   |      |      |      |      |       |      |
| New Smyrna.                  |   | 11.19  | 4.82    | 16  |      |      |      |      |       |      |
| Ocala.                       |   | 11.89  | 2.68    | 20  | 2.68 | 1 30 | 20   |      |       |      |
| Orange City.                 |   | 10.95  |         |   |      |      |      |      |       |      |
| Orange Park.                 |   | 18.01  |         |   |      |      |      |      |       |      |
| Orlando.                     |   | 10.98  |         |   |      |      |      |      |       |      |
| Pensacola.                   |   | 18.58  | 2.70    | 27  |      |      |      |      |       |      |
| Do.                          |   | 5.39   | 28-29   |   |      |      |      |      |       |      |
| Plant City.                  |   | 15.06  |         |   |      |      |      |      |       |      |
| St. Andrews.                 |   | 31.26  | 4.88    | 2-3   |      |      |      |      |       |      |
| Do.                          |   | 16.55  | 27-30   |   |      |      |      |      |       |      |
| St. Francis.                 |   |  | 2.78    | 10  |      |      |      |      |       |      |
| Stephensburg.                |   | 16.46  | 3.10    | 26  | 3.10 | 3 00 | 26   |      |       |      |
| Switzerland.                 |   | 11.32  | 3.15    | 16  |      |      |      |      |       |      |
| Tallahassee.                 |   | 15.43  | 5.20    | 3   |      |      |      |      |       |      |
| Do.                          |   | 3.54   | 28      |   |      |      |      |      |       |      |
| Tampa.                       |   | 17.88  | 3.16    | 1-2   | 1.47 | 0 55 | 4    |      |       |      |
| Do.                          |   | 3.91   | 6       | 3.90  | 1 40 | 6    |      |      |       |      |
| Do.                          |   | 3.98   | 21-22   | 1.50  | 1 10 | 22   |      |      |       |      |
| Tarpon Springs.              |   | 18.05  | 2.94    | 2   | 1.15 | 1 00 | 8    |      |       |      |
| Wausau.                      |   | 20.68  | 6.69    | 8   |      |      |      |      |       |      |
| <i>Georgia.</i>              |   |  |         |   |      |      |      |      |       |      |
| Albany.                      |   | 11.60  | 3.40    | 3   |      |      |      |      |       |      |
| Americus.                    |   | 10.25  |         |   |      |      |      |      |       |      |
| Brag.                        |   | 23.03  | 2.98    | 10  |      |      |      |      |       |      |
| Do.                          |   | 5.98   | 31      |   |      |      |      |      |       |      |
| Bellville.                   |   | 10.48  |         |   |      |      |      |      |       |      |

TABLE XI.—*Excessive precipitation—Continued.*

| Stations.        | Monthly rainfall<br>10 inches, or more. | Rainfall 2.50<br>inches, or<br>more, in 24<br>hours. |         | Amt. | Day. | Rainfall of 1 inch,<br>or more, in one<br>hour. |      | Amt.  | Day. |
|------------------|---|--|---------|------|------|---|------|-------|------|
|                  |   | Inches.  | Inches. |      |      | Ins.  | h.m. |       |      |
| Clayton.         |   | 11.40  | 2.50    |      |      |   |      | 4     |      |
| Columbus.        |   | 11.98  | 3.10    |      |      |   |      | 4     | 1 30 |
| Covington.       |   | 10.68  | 2.60    |      |      |   |      | 4     | 1 32 |
| Crescent.        |   |  |         |      |      |   |      | 16    |      |
| Dahlonega.       |   | 10.89  | 2.65    |      |      |   |      | 4     |      |
| Diamond.         |   | 11.74  | 3.71    |      |      |   |      | 4     |      |
| Elberton.        |   | 12.15  | 3.98    |      |      |   |      | 31    |      |
| Fleming.         |   | 28.60  | 3.16    |      |      |   |      | 18    |      |
| Do.              |   |  | 5.52    |      |      |   |      | 17    |      |
| Do.              |   |  | 5.68    |      |      |   |      | 28    | 5 00 |
| Franklin.        |   | 18.39  | 3.02    |      |      |   |      | 10    |      |
| Do.              |   |  | 2.53    |      |      |   |      | 26    |      |
| Gainesville.     |   |  |         |      |      |   |      |       |      |
| Gillsville.      |   |  |         |      |      |   |      |       |      |
| Harrison.        |   | 16.41  | 4.00    |      |      |   |      | 25    | 1 00 |
| Hephzibah.       |   | 11.80  | 3.50    |      |      |   |      | 26    |      |
| Jesup.           |   | 18.13  | 6.40    |      |      |   |      | 27-28 |      |
| Lagrange.        |   | 12.71  |         |      |      |   |      |       |      |
| Lumpkin.         |   | 12.44  | 3.10    |      |      |   |      | 3     |      |
| Do.              |   |  | 3.88    |      |      |   |      |       |      |
| Mauzy.           |   | 18.16  | 2.59    |      |      |   |      | 5     |      |
| Morgan.          |   | 14.75  | 2.75    |      |      |   |      | 3     |      |
| Do.              |   |  | 3.20    |      |      |   |      | 27    |      |
| Mount Vernon.    |   | 18.50  | 6.50    |      |      |   |      |       |      |
| Newnan.          |   | 14.59  | 4.56    |      |      |   |      |       |      |
| Poulan.          |   | 18.82  | 2.67    |      |      |   |      | 20    |      |
| Do.              |   |  | 2.88    |      |      |   |      | 26    |      |
| Savannah.        |   | 22.79  | 5.44    |      |      |   |      | 16-17 | 1 18 |
| Do.              |   |  | 8.74    |      |      |   |      | 27    |      |
| Talbotton.       |   | 11.06  | 3.03    |      |      |   |      | 3     |      |
| Do.              |   |  | 3.56    |      |      |   |      | 26    |      |
| Tallapoosa.      |   | 10.82  |         |      |      |   |      |       |      |
| Toccoa.          |   |  |         |      |      |   |      |       |      |
| Waynesboro.      |   | 18.80  | 3.00    |      |      |   |      | 16    |      |
| Do.              |   |  | 4.65    |      |      |   |      | 31    |      |
| <i>Illinois.</i> |   |  |         |      |      |   |      |       |      |
| Ashton.          |   |  | 3.16    |      |      |   |      | 15    |      |
| Cambridge.       |   |  | 5.15    |      |      |   |      | 15-16 |      |
| Cordova.         |   |  | 4.00    |      |      |   |      |       |      |
| Dixon.           |   |  | 4.21    |      |      |   |      | 15-16 |      |
| Elgin.           |   |  | 2.65    |      |      |   |      | 3     |      |
| Galva.           |   |  | 4.64    |      |      |   |      | 15-16 |      |
| Glenwood.        |   |  | 2.81    |      |      |   |      |       |      |
| Griggsville.     |   |  | 3.60    |      |      |   |      | 14    |      |
| Henry.           |   |  | 3.50    |      |      |   |      | 15-16 |      |
| Kishwaukee.      |   |  | 4.11    |      |      |   |      | 15    |      |
| Knoxville.       |   | 10.18  | 5.40    |      |      |   |      | 16    |      |
| Laharpe.         |   | 10.40  | 3.40    |      |      |   |      | 7     |      |
| Do.              |   |  | 5.45    |      |      |   |      | 14    |      |
| Lanark.          |   | 3.45   | 15-16   | 1.35 | 0 45 |   |      |       | 23   |
| McLeansboro.     |   |  | 2.60    |      |      |   |      | 8     |      |
| Monmouth.        |   |  | 4.30    |      |      |   |      | 15-16 |      |
| Reynolds.        |   |  | 5.45    |      |      |   |      | 16    |      |
| Rockford.        |   |  | 3.90    |      |      |   |      | 15    |      |

TABLE XI.—*Excessive precipitation*—Continued.

| Stations.                       | Monthly rainfall<br>10 inches, or more. | Rainfall 2.50<br>inches, or<br>more, in 24<br>hours. |       | Rainfall of 1 inch<br>or more, in one<br>hour. |       |
|---------------------------------|---|--|-------|--|-------|
|                                 |   | Amt.   | Day.  | Amt.   | Time. |
| Kansas—Continued.               | Inches.                                 | Inches.  | Ins.  | h.m.   | Day.  |
| Augusta . . . . .               | 2.70                                    | 7  | 1.15  | 0 18   | ?     |
| Columbus . . . . .              | 2.81                                    | 17-18  |       |  |       |
| Dodge . . . . .                 | 4.73                                    | 6-7  |       |  |       |
| Halstead . . . . .              | 4.15                                    | 6  |       |  |       |
| Hutchinson . . . . .            | 5.01                                    | 5  |       |  |       |
| Norwich . . . . .               | 2.64                                    | 17   |       |  |       |
| Olathe . . . . .                | 4.01                                    | 17   |       |  |       |
| Osage City . . . . .            | 4.30                                    | 7  |       |  |       |
| Pratt . . . . .                 | 4.40                                    | 6-7  |       |  |       |
| Rome . . . . .                  | 3.00                                    | 6-7  |       |  |       |
| Winfield . . . . .              |   |  |       |  |       |
| Kentucky.                       |   |  |       |  |       |
| Alpha . . . . .                 | 8.62                                    | 8-9  |       |  |       |
| Bardstown . . . . .             |   |  | 1.22  | 1 00   | ?     |
| Burnside . . . . .              |   |  | 1.47  | 1 00   | 25    |
| Catlettsburg . . . . .          | 3.72                                    | 8-9  |       |  |       |
| Louisville . . . . .            | 8.68                                    | 8-9  | 2.66  | 1 23   | 8     |
| Maysville . . . . .             | 4.05                                    | 9  |       |  |       |
| Middlesboro . . . . .           | 3.17                                    | 9-10   |       |  |       |
| Owenton . . . . .               | 2.62                                    | 8  |       |  |       |
| Richmond . . . . .              | 2.84                                    | 8-9  |       |  |       |
| Scott . . . . .                 |   |  | 1.00  | 0 15   | 8     |
| Vanceburg . . . . .             | 2.75                                    | 9  |       |  |       |
| Louisiana.                      |   |  |       |  |       |
| Abbeville . . . . .             | 3.35                                    | 10   |       |  |       |
| Amite . . . . .                 | 2.80                                    | 11   |       |  |       |
| Clinton . . . . .               | 3.16                                    | 10   |       |  |       |
| Covington . . . . .             | 13.76                                   |  | 2.40  | 1 10   | 27    |
| Franklin . . . . .              | 11.60                                   | 3.04   | 9     |  |       |
| Hammond . . . . .               | 10.78                                   | 3.45   | 7     |  |       |
| Jeanerette . . . . .            | 11.97                                   |  |       |  |       |
| Lafayette . . . . .             | 10.99                                   | 3.75   | 11    |  |       |
| Lake Providence . . . . .       |   | 8.20   | 10    |  |       |
| Lawrence . . . . .              | 10.27                                   |  |       |  |       |
| New Orleans . . . . .           |   |  | 1.01  | 0 30   | 3     |
| Do . . . . .                    |   |  | 1.80  | 0 58   | 5     |
| Plaquemine . . . . .            |   |  | 2.40  | 2 00   | 4     |
| Do . . . . .                    |   |  | 1.25  | 0 30   | 30    |
| Port Eads . . . . .             | 13.39                                   | 3.09   | 26-27 |  |       |
| Sugartown . . . . .             |   | 2.75   | 7     |  |       |
| Venice . . . . .                | 14.39                                   | 4.30   | 9     |  |       |
| Do . . . . .                    |   | 2.84   | 26-27 |  |       |
| Wallace . . . . .               | 10.17                                   | 3.49   | 7     |  |       |
| White Sulphur Springs . . . . . |   |  | 1.74  | 1 05   | 3     |
| Maine.                          |   |  |       |  |       |
| Mayfield . . . . .              | 2.94                                    | 24-25  |       |  |       |
| Maryland.                       |   |  |       |  |       |
| Baltimore . . . . .             |   |  | 1.42  | 0 25   | 1     |
| Do . . . . .                    |   |  | 1.20  | 0 47   | 4-5   |
| Collegepark . . . . .           | 2.76                                    | 12   |       |  |       |
| Cumberland . . . . .            | 3.00                                    | 4  |       |  |       |
| Darlington . . . . .            | 10.89                                   | 3.89   | 24    |  |       |
| Frederick . . . . .             |   |  | 1.37  | 0 28   | 18    |
| Frostburg . . . . .             | 2.54                                    | 4  |       |  |       |
| Grantsville . . . . .           | 2.88                                    | 9  |       |  |       |
| Green Spring Furnace . . . . .  | 2.52                                    | 4  |       |  |       |
| Westernport . . . . .           | 2.88                                    | 4  |       |  |       |
| Woodstock . . . . .             | 2.58                                    | 4  |       |  |       |
| Massachusetts.                  |   |  |       |  |       |
| Attleboro . . . . .             | 2.72                                    | 11   |       |  |       |
| Bedford . . . . .               | 3.16                                    | 19   |       |  |       |
| Cohasset . . . . .              |   |  | 2.00  | 1 30   | 18    |
| Concord . . . . .               | 2.90                                    | 10-11  |       |  |       |
| Fallriver . . . . .             | 3.87                                    | 10-11  |       |  |       |
| Fiskedale . . . . .             | 2.89                                    | 10   |       |  |       |
| Fitchburg . . . . .             | 2.69                                    | 18-19  |       |  |       |
| Groton . . . . .                | 3.08                                    | 18-19  |       |  |       |
| Jefferson . . . . .             | 11.89                                   | 3.89   | 10-11 | 2.00   | 1 15  |
| Leicester Hill . . . . .        | 2.87                                    | 10   |       |  |       |
| Do . . . . .                    | 2.60                                    | 19   |       |  |       |
| Long Plain . . . . .            | 4.08                                    | 10-11  |       |  |       |
| Monson . . . . .                | 10.00                                   | 3.75   | 11    |  |       |
| New Bedford . . . . .           |   | 4.67   | 10-11 |  |       |
| Plymouth . . . . .              | 2.92                                    | 10-11  |       |  |       |
| Provincetown . . . . .          | 3.70                                    | 10-11  |       |  |       |
| Somerset . . . . .              | 3.23                                    | 10-11  |       |  |       |
| South Clinton . . . . .         | 10.72                                   | 3.40   | 10-11 |  |       |
| Westboro . . . . .              | 2.78                                    | 10-11  | 1.87  | 1 30   | 17    |
| Woods Hole . . . . .            | 2.80                                    | 10-11  |       |  |       |
| Michigan.                       |   |  |       |  |       |
| Lake City . . . . .             | 3.50                                    | 22   |       |  |       |
| Mount Pleasant . . . . .        |   |  | 1.45  | 0 30   | 21    |
| Siginaw . . . . .               | 3.53                                    | 3  |       |  |       |
| Traverse City . . . . .         | 4.30                                    | 22-23  |       |  |       |
| Minnesota.                      |   |  |       |  |       |
| Bingham Lake . . . . .          | 3.70                                    | 5  |       |  |       |
| Bird Island . . . . .           | 2.93                                    | 5  |       |  |       |
| Faribault . . . . .             | 3.10                                    | 5  |       |  |       |
| Lake City . . . . .             |   |  | 1.39  | 1 00   | 14    |
| Lake Jennie . . . . .           | 3.17                                    | 5  |       |  |       |
| Lakeside . . . . .              |   |  | 1.21  | 0 30   | 5     |
| Luverne . . . . .               | 2.60                                    | 8  |       |  |       |
| Montevideo . . . . .            | 4.25                                    | 5  |       |  |       |
| New Ulm . . . . .               | 3.17                                    | 5  |       |  |       |
| St. Paul . . . . .              | 2.62                                    | 5  | 1.05  | 0 32   | 5     |
| Willmar . . . . .               | 3.85                                    | 5  |       |  |       |
| Mississippi.                    |   |  |       |  |       |
| Bay St. Louis . . . . .         | 12.49                                   | 2.62   | 9     |  |       |
| Biloxi . . . . .                | 12.53                                   | 3.12   | 27    |  |       |
| Brookhaven . . . . .            | 2.90                                    | 9  |       |  |       |

TABLE XI.—*Excessive precipitation*—Continued.

| Stations.                     | Monthly rainfall<br>10 inches or more. | Rainfall 2.50<br>inches, or<br>more, in 24<br>hours. |       | Rainfall of 1 inch,<br>or more, in one<br>hour. |       |
|-------------------------------|--|--|-------|---|-------|
|                               |  | Amt.   | Day.  | Amt.  | Time. |
| <i>Mississippi—Continued.</i> |  |  |       |   |       |
| Canton                        | Inches.                                | Inches.  | 9-10  | Ins.  | h.m.  |
| Edwards                       |  | 5.16   |       | 2.20  | 2 00  |
| Fayette                       |  | 2.50   | 25    |   | 25    |
| French Camps                  |  |  |       |   |       |
| Greenville                    |  | 8.81   | 9     | 1.82  | 1 00  |
| Lake                          |  |  |       | 3.79  | 1 45  |
| Logtown                       |  | 11.38  |       | 1.68  | 1 20  |
| Macon                         |  | 3.00   | 25    |   |       |
| Magnolia                      |  |  |       | 2.37  | 1 45  |
| Meridian                      |  |  |       | 1.93  | 1 55  |
| Mosspoint                     |  | 16.95  | 2.55  |   |       |
| Palo Alto                     |  |  | 9     | 2.03  | 2 00  |
| Woodville                     |  |  |       | 1.80  | 1 15  |
| Yazoo City                    |  | 2.55   | 10-11 |   |       |
| <i>Missouri.</i>              |  |  |       |   |       |
| Brunswick                     |  | 2.50   | 7     |   |       |
| East Lynne                    |  | 2.83   | 17    |   |       |
| Eightmile                     |  | 2.98   | 17    |   |       |
| Farmersville                  |  | 2.77   | 24    |   |       |
| Harrisonville                 |  | 2.85   | 17    |   |       |
| Kansas City                   |  | 2.81   | 16-17 | 1.05  | 1 00  |
| Do.                           |  |  |       | 1.92  | 1 52  |
| Lexington                     |  | 3.82   | 17    |   |       |
| Liberty                       |  | 4.10   | 17    | 4.00  | 1 50  |
| Mineral Spring                |  | 5.19   | 6-8   |   |       |
| New Madrid                    |  | 6.23   | 6-8   |   |       |
| Oto.                          |  | 5.00   | 7-8   |   |       |
| Seymour                       |  | 2.94   | 8     |   |       |
| Springfield                   |  | 2.92   | 17-18 |   |       |
| Willow Springs                |  | 3.00   | 25    |   |       |
| <i>Nebraska.</i>              |  |  |       |   |       |
| Arapaho                       |  |  |       | 1.95  | 1 15  |
| Callaway                      |  | 2.50   | 5     |   |       |
| Columbus                      |  | 3.33   | 6     |   |       |
| Ewing                         |  | 3.80   | 5     |   |       |
| Fairfield                     |  | 2.55   | 5     |   |       |
| Fairmont                      |  | 2.55   | 6     |   |       |
| Geneva                        |  | 3.68   | 5-6   |   |       |
| Genoa                         |  | 3.26   | 5-6   |   |       |
| Gothenburg                    |  |  |       | 1.25  | 0 20  |
| Grand Island                  |  | 2.50   | 5-6   |   |       |
| Harvard                       |  | 3.17   | 5     |   |       |
| Hastings                      |  | 4.60   | 5-6   |   |       |
| Lexington                     |  |  |       | 1.35  | 0 15  |
| Lincoln                       |  |  |       | 1.37  | 1 00  |
| Lyons                         |  | 3.56   | 6     |   |       |
| Schuyler                      |  | 3.20   | 6     |   |       |
| Strang                        |  | 2.75   | 5     |   |       |
| Tekamah                       |  | 3.25   | 5-6   |   |       |
| Westpoint                     |  | 3.30   | 6     |   |       |
| Wilber                        |  | 2.95   | 6     |   |       |
| Willard                       |  |  |       | 1.00  | 0 20  |
| <i>Nevada.</i>                |  |  |       |   |       |
| San Antonio                   |  | 2.70   | 28    |   |       |
| <i>New Hampshire.</i>         |  |  |       |   |       |
| Bethlehem                     |  |  |       | 1.56  | 1 50  |
| Littleton                     |  |  |       | 1.46  | 0 25  |
| Do.                           |  |  |       | 1.17  | 0 40  |
| Stratford                     |  |  |       | 1.50  | 0 28  |
| Warner                        |  | 2.94   | 19    |   |       |
| <i>New Jersey.</i>            |  |  |       |   |       |
| Camden                        |  | 5.50   | 3     | 5.40  | 1 45  |
| Charlottesville               |  | 2.55   | 9-10  |   |       |
| College Farm                  |  | 2.78   | 18-19 |   |       |
| Toms River                    |  | 4.46   | 1     | 4.46  | 4 10  |
| <i>New Mexico.</i>            |  |  |       |   |       |
| Engle                         |  | 4.40   | 7     | 4.40  | 1 45  |
| Laluz                         |  |  |       | 1.27  | 0 55  |
| Raton                         |  |  |       | 1.00  | 0 35  |
| Santa Fe                      |  |  |       | 1.42  | 1 00  |
| <i>New York.</i>              |  |  |       |   |       |
| Bedford                       |  | 2.54   | 10    |   |       |
| Carmel                        |  |  |       | 2.35  | 2 00  |
| Garrattsville                 |  | 10.14  | 8.80  | 16-17   |       |
| Gloversville                  |  |  |       | 1.24  | 0 50  |
| Greenwich                     |  |  |       | 1.16  | 0 30  |
| Honeymead Brook               |  | 3.14   | 3-4   |   |       |
| Little Falls (Conduit Inlet)  |  | 13.79  | 2.87  | 24-25   |       |
| Middletown                    |  | 3.60   | 23-24 | 3.08  | 2 00  |
| Mohonk Lake                   |  | 2.60   | 4     |   |       |
| Oneonta                       |  | 13.05  | 3.01  | 4   |       |
| Poughkeepsie                  |  |  |       | 2.01  | 2 00  |
| Rochester                     |  | 2.53   | 24-25 | 1.20  | 1 00  |
| Rome                          |  | 10.98  |       |   |       |
| Westpoint                     |  | 2.50   | 19-20 |   |       |
| <i>North Carolina.</i>        |  |  |       |   |       |
| Absbers                       |  | 10.01  | 2.65  | 7   |       |
| Beaufort                      |  | 10.54  |       |   |       |
| Bryson City                   |  | 2.80   | 4     |   |       |
| Chapelhill                    |  | 14.48  | 5.18  | 19  |       |
| Charlotte                     |  | 3.00   | 19-20 | 1.10  | 1 00  |
| Flatrock                      |  | 11.35  | 2.61  | 4   |       |
| Goldsboro                     |  |  |       | 2.10  | 0 35  |
| Hatteras                      |  |  |       | 1.00  | 1 00  |
| Horsecove                     |  | 16.98  | 5.00  | 4   |       |
| Linville                      |  | 4.00   | 4     | 1.20  | 0 32  |
| Louisburg                     |  |  |       | 1.65  | 0 45  |
| Marion                        |  | 10.84  | 2.74  | 19  |       |
| Do.                           |  |  |       | 1.63  | 1 00  |
| Moncure                       |  | 2.88   | 20    | 2.74  | 0 25  |

TABLE XI.—*Excessive precipitation*.—Continued.

| Stations.                        | Monthly rainfall<br>10 inches, or more. | Rainfall 2.50<br>inches, or<br>more, in 24<br>hours. |       | Rainfall of 1 inch,<br>or more, in one<br>hour. |               |      |
|----------------------------------|---|--|-------|---|---------------|------|
|                                  |   | Amt.   | Day.  | Amt.  | Time.         | Day. |
| <i>North Carolina—Continued.</i> |   |  |       |   |               |      |
| Monroe                           | Inches.<br>11.65                        | Inches.<br>2.80                                      | 20    | Ins.<br>.....                                   | h.m.<br>..... |      |
| Murphy                           |   | 2.55   | 3-4   |   |               |      |
| Sloan                            |   |  |       | 1.10  | 0 30          | 10   |
| Soapstone Mount                  |   |  |       | 1.90  | 1 00          | 21   |
| Tarboro                          |   | 3.20   | 30    |   |               |      |
| <i>North Dakota.</i>             |   |  |       |   |               |      |
| Fullerton                        |   |  |       | 1.20  | 1 00          | 21   |
| Lisbon                           |   | 3.32   | 21-22 |   |               |      |
| <i>Ohio.</i>                     |   |  |       |   |               |      |
| Clarksville                      |   | 2.70   | 24    |   |               |      |
| Columbus                         |   |  |       | 1.02  | 1 00          | 1    |
| Do.                              |   |  |       | 1.50  | 0 35          | 3    |
| Gratiot                          |   | 3.02   | 18    |   |               |      |
| Greenhill                        |   | 2.50   | 18    |   |               |      |
| Killbuck                         |   |  |       | 1.22  | 1 00          | 18   |
| Lancaster                        |   |  |       | 1.08  | 0 15          | 24   |
| Orangeville                      |   | 2.80   | 18    |   |               |      |
| Vanceburg                        |   | 3.08   | 8-9   |   |               |      |
| Vanwert                          |   |  |       | 1.96  | 1 00          | 17   |
| Walnut                           |   | 2.70   | 18    | 1.36  | 0 40          | 1    |
| <i>Oklahoma.</i>                 |   |  |       |   |               |      |
| Fort Sill                        |   | 2.95   | 2     |   |               |      |
| Guthrie                          |   | 2.70   | 2     |   |               |      |
| Hennessey                        |   | 2.95   | 2     |   |               |      |
| Hopeton                          |   | 3.30   | 7     |   |               |      |
| Jefferson                        |   | 5.88   | 6     |   |               |      |
| Kingfisher                       |   | 3.69   | 2     |   |               |      |
| Newkirk                          |   | 6.70   | 7     |   |               |      |
| <i>Pennsylvania.</i>             |   |  |       |   |               |      |
| Aqueduct                         |   | 2.89   | 4     |   |               |      |
| Chambersburg                     |   | 2.52   | 4     |   |               |      |
| Coatesville                      |   |  |       | 1.32  | 0 30          | 24   |
| Duncannon                        |   | 2.85   | 4     |   |               |      |
| East Mauch Chunk                 |   | 2.55   | 9-10  |   |               |      |
| Everett                          |   | 2.80   | 10    |   |               |      |
| Glendale                         |   | 3.70   | 4     |   |               |      |
| Greensboro                       |   |  |       | 1.00  | 1 00          | 18   |
| Harrisburg                       |   | 2.82   | 3     | 1.67  | 0 48          | 3    |
| Lebanon                          |   | 10.43  | 4.42  | 4   |               |      |
| Lewisburg                        |   | 5.61   | 9-4   | 2.00  | 1 00          | 3    |
| Do.                              |   |  |       | 2.00  | 1 00          | 4    |
| Philadelphia                     |   | 5.89   | 8-4   | 5.43  | 1 44          | 3    |
| Reedsville                       |   | 3.70   | 3-4   |   |               |      |
| Ridgway                          |   | 2.55   | 18    |   |               |      |
| Shinglehouse                     |   | 2.71   | 18-19 |   |               |      |
| York                             |   | 2.50   | 10    |   |               |      |
| <i>Rhode Island.</i>             |   |  |       |   |               |      |
| Block Island                     |   | 2.70   | 10-11 |   |               |      |
| Bristol                          |   | 4.18   | 10-11 |   |               |      |
| Pawtucket                        |   | 2.94   | 10-11 |   |               |      |
| <i>South Carolina.</i>           |   |  |       |   |               |      |
| Allendale                        |   | 17.90  | 7.45  | 31  | 1 60          | 1 10 |
| Anderson                         |   |  | 3.10  | 18  |               |      |
| Camden                           |   | 13.55  | 2.92  | 12  |               |      |
| Do.                              |   |  | 8.06  | 29  |               |      |
| Central                          |   | 12.08  | 3.44  | 13  |               |      |
| Charleston                       |   | 11.34  | 2.63  | 27-28   |               |      |
| Columbia                         |   |  | 3.29  | 25-26   |               |      |
| Conway                           |   |  | 3.25  | 12  |               |      |
| Effingham                        |   | 12.12  |       |   |               |      |
| Gillisonville                    |   | 24.42  | 4.15  | 26-27   |               |      |
| Do.                              |   |  | 10.43 | 30-31   |               |      |
| Greenville                       |   | 10.10  |       |   |               |      |
| Kingtree                         |   | 11.18  |       |   |               |      |
| Pinonolis                        |   | 14.85  |       |   |               |      |
| Port Royal                       |   | 24.68  | 3.18  | 27  |               |      |
| Do.                              |   |  | 10.82 | 31  |               |      |
| St. Stephens                     |   | 14.66  | 3.05  | 10  | 3.05          | 3 00 |
| Society Hill                     |   |  | 2.95  | 29  |               |      |
| Summerville                      |   | 11.27  |       |   |               |      |

TABLE XI.—*Excessive precipitation*.—Continued.

| Stations.                        | Monthly rainfall<br>10 inches, or more. | Rainfall 2.50<br>inches, or<br>more, in 24<br>hours. |      | Rainfall of 1 inch,<br>or more, in one<br>hour. |              |      |
|----------------------------------|---|--|------|---|--------------|------|
|                                  |   | Amt.   | Day. | Amt.  | Time.        | Day. |
| <i>South Carolina—Continued.</i> |   |  |      |   |              |      |
| Trial                            | Inches.<br>15.20                        | Inches.<br>4.02                                      | 20   | Ins.<br>11-12                                   | h.m.<br>1 00 | 11   |
| Do.                              |   | 2.67   | 30   |   |              |      |
| Yemassee                         |   | 10.35  |      |   |              |      |
| <i>South Dakota.</i>             |   |  |      |   |              |      |
| Flandreau                        |   |  |      |   |              |      |
| <i>Tennessee.</i>                |   |  |      |   |              |      |
| Byrdstown                        |   |  |      | 3.71  | 8-9          |      |
| Carthage                         |   |  |      | 7.27  | 9-10         |      |
| Decatur                          |   |  |      |   |              |      |
| Elizabethhton                    |   |  |      |   |              |      |
| Florence                         |   |  |      | 4.04  | 8-9          |      |
| Franklin                         |   |  |      | 4.17  | 9            |      |
| Lafayette                        |   |  |      | 3.25  | 9            |      |
| Liberty                          |   |  |      | 3.60  | 9            |      |
| McKenzie                         |   |  |      | 2.78  | 9            |      |
| Madison                          |   |  |      | 3.18  | 9            |      |
| Nashville                        |   |  |      | 5.10  | 8-9          |      |
| Do.                              |   |  |      |   |              |      |
| Newport                          |   |  |      | 2.25  | 1 47         | 8    |
| Nunnelly                         |   |  |      | 1.07  | 1 00         | 9    |
| Pope                             |   |  |      | 1.25  | 1 00         | 8    |
| Rogersville                      |   |  |      |   |              |      |
| Sewanee                          |   |  |      | 3.01  | 9-10         |      |
| Springdale                       |   |  |      | 2.70  | 8-9          |      |
| Sylvia                           |   |  |      | 2.75  | 10           |      |
| Tazewell                         |   |  |      | 2.95  | 9            |      |
| Union City                       |   |  |      | 2.75  | 9-10         |      |
| <i>Texas.</i>                    |   |  |      |   |              |      |
| Alvin                            |   |  |      |   |              |      |
| Anna                             |   |  |      | 1.00  | 1 00         | 2    |
| Beeville                         |   |  |      | 2.20  | 2 00         | 1    |
| Brazoria                         |   |  |      | 1.90  | 1 30         | 21   |
| Do.                              |   |  |      | 2.90  | 5            | 5    |
| Brenham                          |   |  |      |   |              |      |
| Columbia                         |   |  |      | 1.12  | 1 45         | 5    |
| Dublin                           |   |  |      | 3.10  | 5            | 3 10 |
| Emory                            |   |  |      | 2.53  | 7-8          |      |
| Estelle                          |   |  |      | 1.87  | 1 00         | 2    |
| Forestburg                       |   |  |      | 2.93  | 1 00         | 25   |
| Galveston                        |   |  |      | 1.65  | 1 30         | 25   |
| Jasper                           |   |  |      | 1.10  | 0 30         | 9    |
| Do.                              |   |  |      | 3.00  | 8            | 2 00 |
| Junction                         |   |  |      | 2.52  | 9-10         |      |
| <i>Virginia.</i>                 |   |  |      |   |              |      |
| Bigstone Gap                     |   |  |      | 3.80  | 9-10         |      |
| Burkes Garden                    |   |  |      | 2.60  | 4            |      |
| Charlottesville                  |   |  |      | 10.61   |              |      |
| Dale Enterprise                  |   |  |      |   |              |      |
| Dwale                            |   |  |      | 2.52  | 4            |      |
| Hot Springs                      |   |  |      | 2.00  | 24           |      |
| Lexington                        |   |  |      | 4.50  | 4            |      |
| Norfolk                          |   |  |      | 2.88  | 4            |      |
| Richmond                         |   |  |      | 5.00  | 14           |      |
| Do.                              |   |  |      | 2.95  | 10-11        |      |
| Spottsville                      |   |  |      | 1.79  | 1 22         | 10   |
| Do.                              |   |  |      | 4.82  | 14           |      |
| Stephens City                    |   |  |      | 3.60  | 2 00         | 14   |
| Wytheville                       |   |  |      | 2.00  | 2 00         | 19   |
| <i>West Virginia.</i>            |   |  |      |   |              |      |
| Beverly                          |   |  |      | 10.06   | 2.70         | 4    |
| Charleston                       |   |  |      | 2.81  | 10           |      |
| Eastbank                         |   |  |      | 3.21  | 10           |      |
| Huntington                       |   |  |      | 3.50  | 8-9          |      |
| Marlinton                        |   |  |      | 2.85  | 10           |      |
| Martinsburg                      |   |  |      | 2.65  | 4            |      |
| Philippi                         |   |  |      | 11.57   |              |      |
| Powellton                        |   |  |      |   |              |      |
| <i>Wisconsin.</i>                |   |  |      |   |              |      |
| Beloit                           |   |  |      | 3.20  | 23           |      |
| Milwaukee                        |   |  |      | 1.96  | 1 00         | 28   |